REVENUE MANAGEMENT STRATEGIES IN THE FINNISH HOSPITALITY INDUSTRY

What are the elements of an optimized revenue management strategy for a Finnish accommodation service provider?

Master's Thesis
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Abstract of master's thesis

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Abstract

Revenue management remains a key function for accommodation service providers. At its essence, revenue management aims to allocate the right type of capacity to the right kind of customer at the right price using the right distribution channels. To fully utilize the potential revenue management concepts can bring to a hotel, a revenue management strategy should be in place. By optimizing their revenue management strategies and implementing them effectively, accommodation service providers can become far more efficient, both economically and operatively. Accommodation service providers should analyze their customers and find the optimal business mix for each hotel for each time period. Then, using a combination of strategic and tactical pricing decisions, they should maximize their profits by selling to the right customers at the right price through the right distribution channel. To enable this, accommodation service providers should find people with correct skills to make the revenue management decisions and optimize their IT system infrastructure in a way that enables automatization.

This research aims to discover the elements of a successful revenue management strategy by analyzing the revenue management strategies currently in place in the Finnish hospitality market. To support the revenue management strategy, inventory management and distribution strategy are discussed to the extent of their relation to revenue management. The empirical part of this research has been conducted using explorative qualitative methods, where key decision-makers for four Finnish accommodation service providers were interviewed to discover the elements that together form a successful revenue management strategy. The elements of a successful revenue management strategy identified in this research can be divided into six themes: organizational (1), data and insights (2), strategic (3), tactical (4), operational (5) and information systems (6). Organizational theme includes elements such as the data capabilities, recruiting revenue managers with correct skills and an optimized organizational structure. Accurate forecast, correct segmentation and use of analytics belong to the theme of data and insights. Strategic elements include price positioning, overbooking and distribution channel selection. Pricing actions and booking conditions are parts of tactical elements. Operational elements include automatization and capacity controls. A well-functioning information system infrastructure enables the effective implementation of the revenue management strategy.

Keywords Revenue Management Strategy, Inventory Management, Hotel Distribution Strategy, Hospitality, Yield Management, Business Mix

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Tuottojohtamisella on merkittävä rooli majoituspalvelutuottajien liiketoiminnan optimoinnissa. Pohjimmiltaan tuottojohtamisen menetelmät pyrkivät maksimoimaan liikevaihdon jakamalla oikean määrän kapasiteettia oikeille asiakasryhmille juuri oikeaan hintaan käyttäen oikeanlaisia jakelukanavia. Jotta tuottojohtamisen potentiaali voidaan saavuttaa, hotelleilla tulisi olla toimiva tuottojohtamisstrategia. Optimoimalla tuottojohtamisstrategiansa ja toteuttamalla sitä käytännössä, hotellit voivat tehdä toiminnastaan huomattavasti tehokkaampaa. Majoituspalveluiden tarjoajien tulisi ymmärtää asiakaskuntansa ja löytää hotelleilleen optimaalinen myyntivalikoima. Tätä tietoa hyödyntämällä ja yhdistelemällä strategisia ja taktisia hintapäätöksiä, hotellit voivat maksimoida tuottonsa myymällä palveluita oikeille asiakkaille oikeaan hintaan käyttäen oikeita jakelukanavia. Mahdollistaakseen tämän, majoitusliikkeiden tarjoajien tulisi löytää oikeanlaiset työntekijät tekemään hinnoittelupäätöksiä. Lisäksi majoitusliikkeiden IT-järjestelmät tulisi optimoida siten, että prosessien automatisointi on mahdollista.

Tämä tutkimus pyrkii löytämään onnistuneen tuottojohtamisstrategian sisältämät elementit analysoimalla Suomen majoitusmarkkinalla käytössä olevia tuottojohtamisstrategioita. Kapasiteetin hallintastrategia ja jakelukanavastrategia kuuluvat tutkimuksen aihepiiriin, sillä niiden rooli on tukea tuottojohtamisstrategiaa. Tämän tutkimuksen empiirinen osuus on toteutettu käyttäen laadullisia tutkimusmenetelmiä ja aineistoon on haastateltu neljän merkittävän Suomessa toimivan majoitusliikkeen päätöksentekijöitä. Tutkimuksen tuloksena onnistuneen tuottojohtamisstrategian muodostavat elementit voidaan jakaa kuuteen teemaan: organisaatioon liittyvät (1), tieto- ja näkemykselliset (2), strategiset (3), taktiset (4), operatiiviset (5) ja tietojärjestelmälliset (6) elementit. Organisaatioon liittyviin elementteihin kuuluvat datanhyödyntämiskyvyt, oikeanlaiset rekrytoinnit ja optimoitu organisaatiorakenne. Ajan tasalla oleva ennuste, segmentointi ja analytiikan oikeanlainen hyödyntäminen kuuluvat tieto- ja näkemyksellisiin elementteihin. Strategiset elementit sisältävät hintaposition, ylibuukkauksen ja jakelukanavien valinnan. Muutokset palveluiden hinnoissa ja varausehdoissa kuuluvat taktisiin elementteihin. Operatiiviset elementit sisältävät automatisaation ja kapasiteetin hallinnan. Toimiva tietojärjestelmien infrastruktuuri mahdollistaa tuottojohtamisstrategian onnistuneen toteutuksen.

Avainsanat Tuottojohtamisstrategia, kapasiteetin hallinta, jakelukanavastrategia, majoituspalvelut, myyntivalikoima

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1 Introduction

This master's thesis is constructed of six parts, each serving a different purpose. The first part, the introduction, has presented a brief introduction to the topics discussed later in the research, as well as the research problem and questions as well as definitions to the key terms used in the research. The second part presents the essential literature previously written on revenue management, capacity management and distribution strategies, in the context of hospitality. The literature review also acts as a theoretical background to support the empirical part. The third part begins the empirical section of the research and describes the methods that were used to acquire and analyze the empirical data for this research. The fourth part gives outlines on the acquired empirical data, while the fifth part will contain a discussion and analysis that is based on the theoretical foundation that was founded in the literature review. The final part will conclude the research by summarizing the conducted research. In addition, limitations of the study and suggestions for further research are outlined.

1.1 Motivation and Background

> *"Revenue management in the context of hospitality is the process of allocating the right type of capacity to the right kind of customer at the right price so as to maximize revenue or yield" (Kimes, 1989, p.15)"*

Revenue management for the hospitality industry, at its essence, entails the optimization of price and availability for a product that has a relatively unchangeable supply in the short term, in order to create the optimal amount of demand to optimize revenue. Josephi, Stierand and Mourik (2016) describe revenue optimization as the art and science of allocating capacity and prices to the right desired customer segment. It sounds fairly simple in theory, but putting it to practice is difficult, mainly because of the complexity of the patterns of unconstrained demand that are difficult to forecast in a volatile environment (Buckhiester, 2013). Companies must be able to adopt a revenue management strategy to fully utilize revenue management concepts and ensure the effective implementation of desired revenue management strategies and techniques. As noted by Kimes (2008), the decision-making process in revenue management affects closely other departments, such as sales and marketing, thus requiring a common way of working from an organization. A survey conducted by Kimes (2011), concluded that Revenue management professionals believe that in the future, the practice of revenue management will be driven strongly by technology and will be more strategic in nature. This study aims to discover and analyze the different elements a successful revenue management strategy has. Because revenue management is closely related to capacity management strategies and tools and distribution strategy, they are also considered to the extent of their relation to the revenue management strategy.

Personally, I find this research project interesting for a few different reasons: the travel industry is exciting and has a huge potential in the Nordic countries. I have always had interest in optimization problems and revenue management at its core is controlling price and purchase conditions to optimize profits. With having some experience in working within the travel industry, the practical applicability of this research was enticing.

This research can benefit both scholars and practitioners. This research aims to create an understanding of what are the elements that together comprise a successful revenue management strategy. The scientific community can gain an understanding on the nature of applications of thoroughly utilized concepts while having an opportunity to build on the themes and elements of a revenue management strategy discovered within this research, as outlined later in the suggestions for further research. Hospitality service providers are clearly beneficiaries for this research. The decision-makers responsible for revenue management functions for hospitality service providers can utilize the themes and elements found in this research to evaluate their respective revenue management strategies. By optimizing their revenue management strategies and implementing them effectively, they can become far more efficient, both economically and operatively. Although this research is focused on the organizations at its unit of analysis, revenue managers can also gain more knowledge and understanding on key concepts of their work, while providing an opportunity to assess their own philosophies regarding revenue management. In addition, this research could be beneficial to companies working in close collaboration with accommodation service providers, such as IT vendors and suppliers, as well as companies in other industries who are considering adopting revenue management principles.

1.2 Research Problem

Tourism holds an important position in the Finnish economy. The size of the travel industry is over 15 billion euros annually and it is 2,6% of Finland's GDP (Visit Finland, 2018). Tourism is also beneficial for other sectors of economy and thus worthy of interest and resources on a governmental level. According to Visit Finland (2018), one euro in tourism adds 56 cents of value to other sectors of economy. The size of tourism exportation is 4,6 billion euros and has doubled since the year 2000. In 2018, there were 8,5 million foreign visitors in Finland, counting for 31% of the overnight stays at Finnish accommodation establishments. (Business Finland, 2018)

In the recent decades, digital advancements have transformed both the way customers purchase travel services and the way companies manage and sell them. This has forced accommodation service providers to rethink their strategies and ways of working in order to reach a competitive advantage in the marketplace (Abrate & Viglia, 2016). As stated by Josephi et al. (2016), by performing effective revenue management, hotels can greatly increase their financial performance. According to Kimes (1997), by adopting revenue management and dynamic pricing, hotels can increase their revenue by 3-7% and thus their profits by 50-100% without increased capital expenditure. However, to fully maximize the benefits revenue management can bring, companies should have a revenue management strategy that has been implemented effectively.

The amount of available data has greatly increased from the past, and thus accommodation service providers should learn how they can take advantage of the various data sources available to them. Modern revenue management systems allow the automatization of simple revenue management actions and by utilizing machine learning, these systems get more intelligent and advanced over time. Due to these factors, the role and tasks of revenue manager may well have changed, but the importance remains at least as prominent as it ever has been. The digital advancements have brought hotels access to new potential customer groups that are completely untapped for them. That phenomenon may also create new competitors who may be located different areas but are within a customer's expanded selection criteria. This increased variety (among other factors) has created even better opportunities for companies to take advantage of their distribution strategy to optimize their business mix. However, creating a successful revenue management strategy may not be a simple task, since it requires a need to understand many different elements of the business, such as revenue optimization, capacity management and designing an IT infrastructure that enable the company to fully implement the revenue management strategies.

There is a relatively large amount of research conducted about some aspects of revenue management, such as dynamic pricing and the relationships between hotels and online travel agents. However, the strategies behind the decisions have not been studied nearly as extensively as the quantitative optimization problems. The geographical location and weather of Finland have made seasonality a strong external force for the Finnish hospitality industry, requiring more effective revenue management from hotels due to the increased variance in demand. The exotic winter in the north combined with the capital region dominated by business travel together create an environment where revenue management practices can fully be taken advantage of. For those reasons, a qualitative study about the elements of revenue management strategies, especially in the Finnish market, can provide value both for the hospitality industry and the scientific community.

1.3 Research Questions

This research aims to fulfill the gap in prior research by analyzing and attempting to discover the elements within successful revenue management strategies currently in place at Finnish accommodation services providers. This master's thesis has three research questions: one primary research question and two secondary research questions. The role of the secondary research questions is to be supportive to the primary research question. Thereby, this research aims to answer the following research questions:

PR1: "What are the elements of a successful revenue management strategy for an accommodation service provider?"

The primary research question aims to understand the different elements that a successful revenue management strategy consists of. Revenue management strategy aims to maximize the profits acquired from providing hospitality services. This study is focused on accommodation service providers and thus, other businesses such as transportation businesses and other fields which are using revenue management practices are not discussed. Revenue management strategies generally include a pricing strategy, a capacity management strategy and a distribution strategy. In addition, the revenue management strategy should include revenue managers' role and placement in the organizational structure and the desired characteristics and skills for revenue managers. Capacity management and distribution strategies are such large entities that they have been assigned their own secondary research questions but since pricing optimization is such an integral part of a revenue management strategy, it will be discussed within the primary research question. This primary research question aims to identify and analyze the different elements that together form the successful revenue management strategies currently in use by accommodation service providers in the Finnish market. These results can then increase the understanding on the characteristics of a successful revenue management strategy and can be used to evaluate a company's revenue management strategy.

SR1: "What are the elements of inventory management strategies and tools that should be in place to support the revenue management strategy?"

Revenue management strategy should contain an inventory management strategy. The first secondary research question aims to understand these supporting strategies and tools to the extent of their relation to the revenue management strategy, thereby the aspects not directly relating to revenue management will not be discussed. Inventory management strategy is a key part of a successful revenue management strategy. Inventory management strategy includes both non-price capacity management strategies and techniques as well as the IT infrastructure. Non-price capacity management strategies can include common techniques, such as taking reservations and overbooking some of the capacity. The quality of the IT infrastructure is essential for the success of the revenue management strategy, especially the revenue management system, which allows the revenue management strategy to be effectively put in practice. In order to support the PR1, this research aims to understand the capacity management strategies and tools to the extent to the relation to the primary research question. This understanding is essential to form the overall picture of the revenue management strategy and its elements.

SR2: “What are the elements of an optimal distribution strategy to support the revenue management strategy?”

The second secondary research question discusses distribution strategy to the extent of its relation to the revenue management strategy. The role of distribution strategy is to evaluate the hotel’s optimal business mix and then implement that to the practice by finding ways to sell the services to the right customers through the right distribution channels, to ensure both financial and operative effectiveness. The second secondary research question aims to get an elementary understanding on what the elements of an optimal distribution strategy are, to enable the execution of a hotel’s business mix. The topic of distribution channels for hospitality is rather extensive, thereby this research focuses on it only on to the extent of its relation to revenue management. There could certainly be use for further research focusing on the business mix and the choices of distribution channels, regarding aspects such as online travel agents, marketing and visibility in desired regions.

1.4 Definitions

Business Mix	*"The variety of guest types at a hotel that together make up the hotel's clientele. A typical business mix might be part business travelers, leisure travelers and convention business." (www.thelawdictionary.com)*
Capacity	*"A set number of rooms in a single hotel" (www.xotels.com)*
Distribution Strategy	*"Distribution Strategy determines when and through which channels to sell hotel rooms based upon an analysis of the costs of acquisition of the individual channel" (www.xotels.com)*
Online Travel Agent (OTA)	*"OTAs are online companies whose websites allow consumers to book various travel related services directly on internet (www.xotels.com)*
Revenue Management	*"Revenue management in the context of hospitality is the process of allocating the right type of capacity to the right kind of customer at the right price so as to maximize revenue or yield"* (Kimes, 1989, p.15)
Total Revenue Management	*Total revenue management is about optimizing revenues and profits from all revenue streams and finding the most profitable mix of business for the entire hotel asset.* (Buckhiester, 2012)
Yield Management	*The practice of achieving the optimal business mix by to fulfill the revenue of a hotel by selling an optimal amount of capacity. (Berman, 2005)*

2 Literature Review

In this literature review, the relevant literature on revenue management strategies for the hospitality industry is presented. The aim of this section is to form an overview on the previously conducted research, which will act as the basis for the empirical part of this master’s thesis. The literature review is divided into three chapters. The first chapter discusses revenue management and pricing strategies. The second chapter discusses inventory management strategies and all methods that belong to the revenue management strategies but do not include manipulating the price of the service, along with information systems for the hospitality industry. The third chapter then gives an overview on distribution strategies for the hospitality industry.

2.1 Revenue Management in Hospitality

The practice of revenue management begun in the airline industry in the 1970s where the airlines attempted to maximize utilization for every available seat (Cross et al., 2009). There is a considerable amount of literature on revenue management, often focusing on either airline tickets, hotel rooms or car rental services. Much of the research on revenue management is focused on the quantitative techniques to improve technical aspects such as forecasting, pricing and capacity optimization. However, other integral parts, such as organizational culture and revenue management strategy have been studied far less. (Josephi et al., 2016)

In general, revenue management strategies adapt well to industries which have perishable inventory, such as hotel rooms. Kimes (1989a, p. 15) defined revenue management in the context of hospitality as “the process of allocating the right type of capacity to the right kind of customer at the right price so as to maximize revenue or yield”. She later expanded the definition slightly by adding the concept of selling at the right time (Kimes, 2000). Hayes and Miller (2011) then later expanded the definition by adding the concept of selling through the right distribution channel. In order to be able to fully benefit from revenue management concepts, a company should have relatively fixed capacity, a perishable inventory and fluctuating demand (Kimes, 1989a). Bull (2006) described the hospitality industry as ‘peculiar’, because the companies are forced to handle customer segments that have vastly different price and demand elasticities. Their services are perishable and intangible, but their capacity is fixed. These conditions demonstrate how particularly well revenue management principles are suited to the hospitality industry. Thereby it is natural, that revenue management practices have been used for decades in hospitality.

Often, hotel revenue management has been modeled using a linear formulation model where the decision variables are the number of hotel rooms allocated to each rate class or as a shadow price approach, which is often used for services such as call centers and reservation systems. (Kimes & Wirtz, 2013). The below formula attempts to maximize revenue with given capacity, as is the main concept of revenue management. Rate classes are pre-given in the simpler model described below. (Kimes & Wirtz, 2013)

$$Maximize \sum_{j=1}^{m} * \sum_{i=1}^{n} * \sum_{t=1}^{p} R_{ij} \quad * A_{ijt} \tag{1}$$

Subject to

$$\sum_{j=1}^{m} * \sum_{i=1}^{n} * A_{ijt} \leq C_t \text{ for all } t$$

$$A_{ijt} \leq C_{ijt}\,, A_{ijt} \geq 0$$

i = rate class; ***j*** = length of stay; ***t*** = time period; ***Aijt*** = number of hotel rooms to sell for each *ijt* combination; ***Rij*** = Revenue from *ij* combination; ***C*** = Capacity

The linear formulation model describes the effort to maximize revenue by creating an optimal combination of rate class and length of stay on a given time period and then integrate available capacity into the equation while acknowledging that the rooms sold can never exceed the available capacity. (Kimes & Wirtz, 2013)

The accommodation service provider must be able to estimate the demand for each service in order to set an optimal price for it. The challenging aspect for the industries with perishable inventory is that the forecasting must be done on a time series, meaning that the demand can vary not only depending on when the service is consumed but also at the time of purchase, which creates more complication to the demand estimation process. This process is called forecasting, and it is one of the most crucial tasks of revenue management. (Altin, 2015)

Ivanov (2014) describes hotels' revenue management processes as a system. The process is always cyclical but can be viewed as starting at the time a customer places a request to book a room, regardless of the channel they are using. That request arrives to the hotel's revenue management system as a new data entry. In the system's structural elements, it analyses the data using its structural elements, such as the Revenue Management software and Revenue management tools, and if needed, a revenue management team. There are external impacts that could affect the price, such as internal or external environments. That booking is then either accepted or declined based on the current availability and then returned to the customer within the "hotel booking elements". The customer will then perceive the fairness of the revenue management process and possibly book again in the future. (Ivanov, 2014)

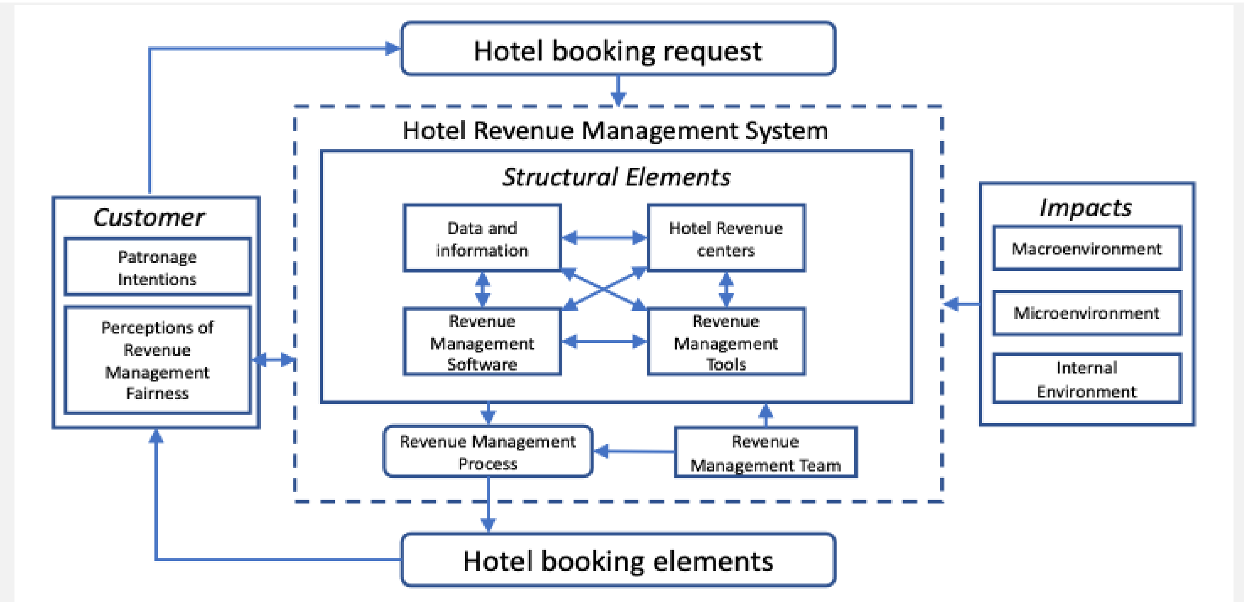

Figure 1: Revenue Management as a System[1]

[1] Fig. Adapted from Ivanov (2014)

2.1.1 Revenue Management Strategy and Operations

When interviewing industry professionals, Kimes (2011) found that the focus of revenue management is shifting from tactical actions, such as managing revenue from a room level to more strategic level. When pricing is considered a 'strategic process', companies can achieve a better financial performance (Vorhies & Harker, 2000).

Altin (2016) divides the most common implementation options for a revenue management strategy into an in-house, centralized, outsourced and a mixed strategy. Hotels must choose whether they wish to perform revenue management operations within each hotel's personnel, have a centralized model where every hotel for a country or the company is managed by a centralized team or a fully outsourced model, where a third-party company performs revenue management operations. The closer revenue management is done to the hotel, the more control they have over the revenue management. They are able to respond to the changes in demand faster, and the organizational capability will be higher. However, there is an increased need for resources (time and monetary) and local controls. (Altin, 2016) According to a survey conducted by Kimes (2011), a large majority of industry professionals expect revenue management to be practiced either on a central or regional level, depending on the organization. Half of the respondents estimated that revenue management would be located in its own department. The second-most popular answer was the sales and marketing -department. (Kimes, 2011) Altin (2015) describes the most important tasks that belong to revenue management to be forecasting, setting controls and monitoring the property's performance.

The successful implementation of a revenue management strategy requires certain skills from the revenue managers. The survey conducted by Kimes (2011) concluded that because revenue management is going to be more strategic in nature, it will require strong analytical and communicational skills from the revenue managers. A versatile revenue manager needs to have technical and analytical expertise as well as management skills such as decision-making, communication and skills in leading strategy. (Kimes, 2017) Hallberg (2017, p.1) found 'individual judgment, human capital and commercial experience' to be very important when a company is implementing a pricing strategy. De Vries and Pak (2011) argue that revenue managers' roles should be changed to have more responsibility and authority within the organization. According to Josephi et al. (2016), successful revenue managers do not need to have a background in hospitality, because making correct pricing decisions is comparable to various products and services and require mathematics and econometrics skills rather than experience in hospitality.

As revenue management becomes more and more analytical, the measurements of revenue management will ultimately change. Traditional measures, such as revenue per available room (RevPAR), will not be sufficient in the future since the metric does not take ancillary services into consideration (Kimes, 2011). In the future, it is likely that revenue management will transform into total revenue management for the whole group instead of one hotel or its accommodation services (Josephi et al., 2016). This in practice means that revenue management aims to optimize the revenue for the entire hotel instead of solely its accommodation services. However, the implementation of total revenue management principles has progressed rather slowly. (Kimes, 2016) Alternative suggestions to measure the success of revenue management have been made, such as use the lifetime customer value (Noone et al., 2003).

2.1.2 Customer Segmentation

Hotels have long segmented their customers based on price sensitivity (Smith et al., 1992). Kimes and Wirtz (2013) argue that a firm’s success of implementing a revenue management strategy is dependent on accurately and correctly segmenting their customers and more analytical methods should be used to achieve that. Kimes (2003) underlined the importance for the company to have a clear understanding of the price sensitivity of their customer segments for their services.

Research by Alderighi et al. (2016), among others, indicated that the customers’ reason to travel influences the nature of their purchasing decision. A leisure customer is more flexible in their traveling dates but often prefers to travel during the weekends. They also book their stays further in advance. A business customer has a more specific need to travel and thus cannot be flexible on the traveling dates. In addition, often the person making the purchase decision is not the one paying for the room and therefore might not be incentivized to find the best possible rate, making the business customers’ demand less price elastic. Phillips (2005) studied these differences in his book and summarized them in the table below. Even though his research was focusing on passenger airlines, remarkable similarities to the hospitality industry can be found and therefore the data is applicable to the hospitality industry. A hospitality consultancy Xotels.com suggest that hotels should identify the business travelers by the characteristics of their booking. A short mid-week stay can be considered as a business trip if the reason cannot be identified using other methods. In addition, customers can be asked that question when they are making the booking. (www.xotels.com)

Table 1: Characteristics of business vs. Leisure customers at passenger airlines[1]

Characteristics of business vs. Leisure customers at passenger airlines

	Leisure Oriented Traveler	**Business Oriented Traveler**
Price Sensitivity	Highly Price Sensitive	Less Price Sensitive
Timing of booking	Books earlier	Books later
Flexibility	More flexible to departure and arrival times	Less flexible to departure and arrival times
	More acceptable of restrictions	Less acceptable of restrictions

2.1.3 Pricing Optimization

Phillips (2005) calls pricing (and revenue) optimization as a 'tactical function', which inherently realizes that prices must be adaptable. The practice of changing the price for a service with perishable inventory is also called yield management. To extend the concept to a strategic level, it has later been redefined as revenue per available inventory. (Cross et al., 2011; Kimes; 1989) This differs from strategic pricing, which aims to set a price position for a product or a service against its competition within a market. In more practical view, strategic pricing sets the limits where pricing optimization operates in. Pricing strategy is closely related to inventory management and distribution strategy. Because hotels are working with perishable inventory, they must be able to create sufficient demand to sell the optimal amount of rooms each night (Kimes, 1989). The easiest way to manipulate that demand is though pricing. Lowering the price for the hotel room creates additional demand.

[1] Table adapted from Phillips (2005, p. 124)

Kimes and Anderson (2011) divide discounting into two categories: price and nonprice methods. Nonprice methods consist of focusing on a loyalty program, focusing on quality, creating strategic partnerships and new market segments. Price methods include creating packages, using opaque distribution channels (discussed more on 2.3.1.) and offering discounts to selected customer segments. High-end hotels should be careful when launching discount campaigns, because that can harm their brand image (Kimes & Anderson, 2011). If there is excessive demand, the hotel can raise the price to gain more revenue for that capacity, because they can only sell more rooms than their capacity by overbooking.

Figure 4: Factors that affect the price of a service[1]

Pricing strategies are often divided into two categories: uniform pricing and dynamic pricing. There isn't a clear consensus in the academia, which strategy is more profitable, and therefore one strategy might not be directly transferable to another hotel. However, generally the newer research often promotes the use dynamic pricing methods, due to the advancements in information systems. Sweeting (2012) and Sen (2013) argue that hotels could gain remarkable performance improvements by adapting to dynamic pricing. However, some research has indicated that fixed or uniform pricing can lead to better results.

[1] Fig. Adapted from Melis and Piga (2017)

(Gallego and van Ryzin, 1994; Xia, Monroe and Cox, 2004). Hotels should choose their pricing strategy based on the individual circumstance of the service they are offering and the competitive environment they are in. Hotels do not necessarily have to use same methods for each segment and making the decision on the pricing on the segment-level can be beneficial to the hotel. When working with distributors, the accommodation service provider must decide to what kind of pricing strategy they will use with each reseller. Traditionally, uniform pricing is used more often with resellers that work with the merchant model, because in that model, the reseller faces the risk of unsold rooms and therefore often holds the right to set the price at a point they see as optimal. (www.xotels.com)

2.1.4 Uniform Pricing

Uniform pricing is a pricing method where an accommodation service provider sets a price for a certain night before a booking window starts and that price will not be changed during the booking window. However, it does not mean that all nights are priced similarly. A hotel makes an estimate for the demand for each night and attempts to set a correct price for the service. The uniform pricing method significantly reduces the need of active revenue management and can increase customers' trust that the price is fair and therefore increase the likelihood that they are booking early and not waiting for the price to decrease. (Melis & Piga, 2017) There is research showing clear benefits to uniform pricing. Because of the uncertain nature of demand, revenue managers prediction abilities may lead to wrong conclusions (Orbach and Einav, 2007). Viglia et al. (2016) noted that when rates are constantly being manipulated, it can reduce the reference price a customer is willing to pay for the service. Also, price increases can be viewed as unfair by customers (Orbach & Einav, 2017). Melis and Piga (2017) demonstrate the forces that could promote the use of uniform pricing strategies in the table below. The most important factor that promote uniform pricing strategies are menu costs, managerial costs, perceived price unfairness, quality perceptions and the uncertainty of demand. Vice versa, if the abovementioned factors are weak, there could be a strong base for using dynamic pricing (discussed more in 2.1.5.)

Table 2: Factors that promote uniform strategies[1]

Factors that promote uniform pricing strategies to be used	Menu Costs
	Managerial Costs
	Perceived price unfairness
	Price as a quality signal
	Demand uncertainty

Zbaracki et al. (2004) categorized the main reasons to opt to using uniform pricing methods as strategic and cost based. There are relevant managerial and customer costs to change prices. The revenue managers must gather necessary information on which they can base their decisions. In addition, the customers need to be informed about the new prices (Brynjolfsson & Smith, 2000). However, OTAs and new technologies have greatly reduced the effect of menu costs in the hospitality business (Melis & Piga, 2017; Kalnins, 2016; Zbaracki et al., 2004). It is also rather common to use uniform pricing methods for some segments and dynamic pricing methods for others.

2.1.5 Dynamic Pricing

McAfee & Te Velde (2006) define dynamic pricing as the method of varying the price of a certain departure over the booking horizon. In practice, this means that the hotel can change their prices based on the estimated demand for the same departure. The broader phenomenon is called price discrimination. It can occur, when a company has set different prices for two similar products (Armstrong, 2006), and in the case of dynamic pricing, changing the prices over the booking horizon. According to a 2014 study by Global Business Travel Association, 75% of hotels in the study were aware of dynamic pricing strategies. However, only 22% had actively started using them. (GBTA, 2014)

[1] Table adapted from Melis and Piga (2017)

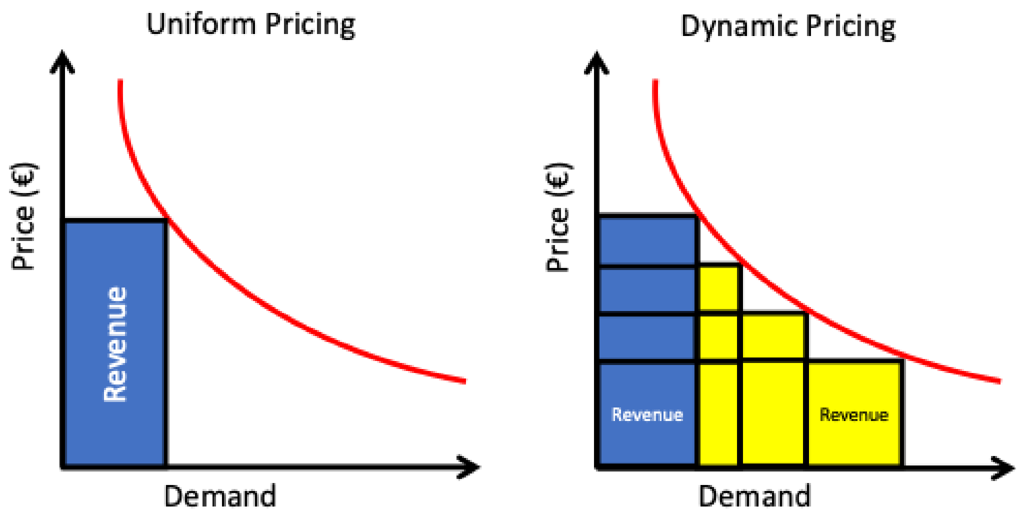

Figure 2: Economics of Uniform and dynamic pricing[1]

The above figure describes how adopting dynamic pricing and changing the price stimulates the demand. When a price for a product is high, there will be a lower demand for it. However, when the price is decreased, the demand increases simultaneously to the extent of the price elasticity of the customer. When operating with perishable and fixed inventory, stimulating the demand is very important. If a hotel sees that they have too many unsold rooms, they can stimulate the demand by lowering their prices. Vice versa, if there is more demand than available capacity, the hotel can increase their revenue by increasing the price. Because revenue can be calculated by multiplying sold rooms with the selling price, the revenue can also be increased by adopting dynamic pricing methods. (Bilotkach et al., 2015)

Literature has shown two theoretical reasons for hotels to decrease the price of their services. An unsold hotel room does not bring any revenue due to the perishing nature of inventory. At the same time, fixed costs are accrued regardless of whether the room is sold or not. Reducing the price is the simplest way to boost insufficient demand. (Melis & Piga, 2017) Therefore, there is an incentive for hotels to decrease prices towards the consumption date if there are not enough bookings (Talluri & van Ryzin, 2005). Bachis and Piga (2011) studied the low-cost airline market and discovered actions that have been proven successful to reduce the predictability of price movements. They have both offered secret discounts and

[1] Fig. adapted from www.priceintelligently.com

applied random decreases to prices in order to increase flights' load factor (Bachis & Piga, 2011; Bilotkach et al., 2015). On the other hand, there can also be valid reasons to increase the price. Due to the finite capacity in the short term, a hotel can increase the price because they do not benefit from the demand that is excessive to their capacity without increasing the price. Because the price is set before the demand is known, the revenue manager can also intervene and generate additional demand by lowering the price. These revisions can be classified as stochastic peak load pricing (Bilotkach et al., 2015).

Research has been made, which has concluded that price discrimination, which leads to better profitability, can be possible also in markets that are competitive (Dana, 1998). Travel industry has been one of the first industries to fully adopt dynamic pricing, this is due to an inflexible and perishing short-term capacity and relatively small variable costs (Abrate, et al., 2019). Already in the 1980s, tourism-related companies started to develop e-commerce applications in order to optimize their revenue and manage their inventory better. (Abrate, et al., 2019) Because the tourism industry is a favorable condition to practice dynamic pricing, it is more likely that there is more fluctuation in the prices. Consumer behavior literature discusses the perceived fairness of dynamic pricing. The customer may feel that it is unfair that someone else can buy the same product for a cheaper price (Haws & Bearden, 2006; Xia et al., 2004). Kotler et al. (2015) emphasize the nature of perception in price fairness. Factors such as past purchases, product knowledge and company's marketing activities may affect the perceived price fairness. Every customer could have a different perception on what a 'fair' price is (Kotler et al., 2015). Customers have a reference price in their mind, to which they compare the current selling price to. That can increase the perceived price unfairness that can deter some customers (Fosfuri et al., 2015).

Elmaghraby and Keskinocak (2003) divided customers into two categories: myopic and strategic. A myopic customer makes a purchase if the price is lower than what their reference price is. A myopic customer does not consider the dynamic movement of the price across the booking window. A strategic customer also considers the fact that the price might be moving in the future (Chen & Schwartz, 2008). Their decision-making process also includes the timing of the purchase. These decisions are ultimately much more complex and difficult to estimate and predict by the seller of the services (Elmaghraby & Keskinocak, 2003). With the majority of purchases being currently made online, it is now easier than before for the customer to evaluate whether the price is changed dynamically and that has changed the purchasing decision process for the customer. Su (2007) noted that the customer's degree of patience influences the purchasing decision. A more patient customer is willing to wait and see if the price will decrease when a departure date is getting closer. In general, it is more common that prices are increasing throughout the booking window (Alderighi et al., 2016; Gaggero & Piga, 2011). Nelson (1970) classified accommodation services as 'experience goods', meaning that the quality of the service can only be known after the consumption. Price is seen as an extremely high indicator of quality (Akshay, 2005). Thus, revenue managers should be careful when making price decreases because they could eventually lower the demand (Nelson, 1970).

Modern technologies have enabled the efficient changing of the hotel room price. This has reduced the menu costs and enabled hotels to potentially increase their margins (Melis & Piga, 2017; Kalnins, 2016). Selmi and Dornier (2011) introduced two elements that are preconditions to implementing a successful dynamic pricing strategy. There must be a sufficiently efficient IT infrastructure in place. Due to cloud solutions aimed at smaller companies, this has become easier in the last few years (Bayoumi et al., 2013; Melis & Riga, 2017). Modern technologies have also enabled behavior-based price discrimination, in which a company can charge a different price from different people, usually in form of loyalty discounts. Technically, in the future it could also be possible for a firm to charge different prices based on assumptions of the buyer's willingness to pay. In addition, some training is needed to enhance revenue managers' understanding of dynamic prices and overcome possible skepticism (Van der Rest et al., 2018). Den Boer (2015) emphasized that applying dynamic pricing processes in a marketplace with incomplete information and unpredictable demand requires more advanced skills from the revenue managers. Setting up dynamic pricing requires more technical and economic understanding from the accommodation service providers but can be very useful in maximizing profits in an industry, which is highly susceptible to fluctuations in the economy.

2.2 Inventory Management Strategies in Hospitality

2.2.1 Capacity Management

Capacity management is the practice of controlling perishing inventory in industries such as hospitality or airfare. The principles of capacity management were introduced to many service industries in the mid-1980s (Berman, 2005). Berman (2005) described the main objective of managing capacity as achieving the optimal business mix to maximize the hotel's revenue. In the hospitality industry, companies have perishable inventory that is relatively fixed, at least in the short term (Kimes & Wirtz, 2013). If there is excessive demand, the hotel cannot increase the amount of hotel rooms for that night. It is possible to increase capacity, but expansions are costly, time-consuming and relatively permanent. If the increase in demand is temporary, it will increase the likelihood of unsold capacity at a time of lower demand. In a destination where demand is extremely seasonal, such as Lapland in Finland, large expansions could be challenging to rationalize. Because the expansions are very capital-intensive, it makes the fixed costs large but the variable costs for the hospitality industry relatively small (Abrate et al., 2019; Kimes & Wirtz, 2013). Because of that, there is incentive for hotels to sell their unsold capacity (Kimes & Wirtz, 2013). Due to the perishable nature of inventory, the hotels cannot sell an unsold room the following day, unlike in many other businesses. Because the capacity is fixed in the short term and the demand is fluctuating heavily, balancing availability and demand is difficult (Abrate et al., 2019). The actions companies take to maximize revenue by controlling inventory as described is called yield management (P. Ebiendele & H. Ebiendele, 2018) Noone et al. (2011) argue that when more data has been made available for revenue managers, there has been a shift from capacity management to price optimization, meaning that instead of allocating a certain amount of rooms to a segment, the focus has moved to determining the correct price level for each segment. However, the importance of capacity management as a part of a successful revenue management strategy still pertains. (Noone et al., 2011)

When the company decides to use a third-party seller, they must decide on what form of inventory they prefer to have in that sales channel. A strategy that has been observed commonly is to have some rooms shown as sold out on online distributors' websites, but still sell them through the hotel's own sales channel to avoid paying a commission (Ling et al., 2015). Ling et al. (2015) suggest an operative capacity management strategy where a hotel is selling rooms both through their own channels as well as through online distributors.

Then the hotel should forecast their future demand with accrued booking data and then estimate an optimal time announce a stop sale for the online distributors. The last rooms can then only be booked through the hotel's own sales channel.

2.2.2 Inventory Control

Inventory control (sometimes also called capacity control) is a key concept in a modern revenue management strategy. In practice, it consists of all processes which are aimed to sell the right amount of rooms at the right time. According to Talluri and van Ryzin (2004), capacity control is concerned with optimally selling a fixed but perishable capacity in a time horizon by controlling the availability of the products on sale. As described by Kimes and Wirtz (2013), inventory is controlled by taking reservations, as hotels have done for a long time. Reservations enable hotels to store demand, thus making controlling inventory easier. It is advisable to ensure that at the end of booking window there are still rooms to sell (Weatherford & Bodily, 1992). This can be done either by not making some units available until the very end of the booking window or adjusting the price dynamically throughout the booking window.

Steinhardt and Gönsch (2012) note that traditionally, capacity control often undervalues or ignores the possibility for service providers to offer services that are substitutable and preferable for the consumer. This could, in practice, mean a business class seat instead of an economy class seat on an airplane, or in the case of the hospitality industry, a bigger room or a suite. It will be classified as 'upgrade', if the superior product or service is offered at no extra cost, or 'upsell', if the customer is paying to receive the superior product or service. (Steinhardt & Gönsch, 2012) Offering these upgrades or upsells at an attractive price can be useful tools for companies, because in situations of differing amount of demand for different services at times (for example, in some holiday destinations, bigger hotel rooms can have more variety in their demand than smaller rooms' during times the coincide with school holidays), upgrading or upselling can lead to reducing their unsold capacity. In addition, customers who are offered upgrades are generally more satisfied with the service provided. By doing this, the company attempts to optimize their revenue using a strategy where they allocate capacity to different demand classes. (Koenig & Meissner, 2015)

Hotels typically protect themselves from late cancellations by overbooking. They must estimate the number of cancellations and no-shows and overbook just enough that cancellations and no-shows are offset by the overbooked customers. If they have overbooked too much, they are forced to displace customers, which can be costly. (Kimes & Wirtz, 2013). When controlling fixed capacity, the uncertain nature of demand exposes companies to the concept of risk. Risk can often have a negative connotation, but in revenue management, risk describes the uncertainty of demand. A company makes their revenue management decisions based on their forecast for the demand for a certain product at a certain time. The company can choose to be either risk-seeking or risk-averse, depending on their estimate of future demand (Levin et al., 2008). In a risk-averse policy, the company tries to stimulate the demand for their products by having a lower price for their service earlier during the booking window (Feng & Xiao, 1999). Weatherford (2004) notes that optimizing expected utility instead of expected revenue is a strategy that can be useful for companies seeking for a risk-averse solution. In a risk-seeking strategy, the company in turn chooses a higher price for their product and therefore exposes themselves to the risk of leaving unsold hotel rooms or airplane seats. However, if the demand turns out to be higher, they can reap the rewards by accumulating more revenue from their customers. Feng and Xiao (2008) pointed out that managerial decisions often have impact on how risk-averse a company's revenue management strategy is.

2.2.3 Information Systems for Hospitality

The recent advancements in information systems have made the role of information systems for tourism service providers irreplaceable. Thus, technology is expected to drive the change in revenue management in the future (Kimes, 2011). In 2018, 78% of tourism and accommodation service providers had made investments in either IT equipment or systems and 23% of them had started using new technologies (Ministry of Employment and the Economy, 2018). Karadag and Dumanoglu (2009) found that investments in ICT technologies have increased the production capabilities for accommodation service providers. However, some resistance from both the employees and potential customers has occurred.

There is a number of options for information systems hospitality providers can use. Computerized reservation systems become popular after Sabre was able to revolutionize the airline business together with American Airlines in the 1960s. (Phillips, 2005) Property management system (PMS) is a computer software that enables the accommodation service provider to effectively manage their inventory (www.techtarget.com). They are sometimes also referenced as hotel operating systems. PMS is a centralized system where the service provider performs their daily actions, such as creates and manages their bookings, keeps record that the rooms are maintained and manages check-ins and check-outs. These systems can greatly increase operating efficiency and the bigger the hotel is the more important it is to make sure it is working efficiently and has the necessary features. An alternative to a property management system is a computerized reservation system (also sometimes called centralized reservation system, CRS), which is usually used in bigger hotel chains. The price for the room usually resides in the PMS or in the CRS. (Xotels.com) As the technology is advancing further and revenue management becomes more analytical, Kimes (2011) suggest that the importance of customer relationship management (CRM) systems are likely to become more important when hotels are basing their decisions on total customer value instead of short-term goals.

Channel manager is another computer software that works together with the property management system. The emergence of digital ecosystems has created a need for a system that enables the accommodation service provider to sell their products through multiple channels. Channel manager's role is to connect the service provider's property management system to third-party sales channels, such as Booking.com or Expedia. The extent of information that is flowing through the channel manager depends on both the capabilities of the channel manager and the third-party reseller. Usually the channel manager is at least able to transmit the bookings that take place on the seller's website and then update the availability on the service provider's operating system to avoid double bookings. Whether that is updated automatically or manually to another third-party website's availability depends on both the sophistication of the channel manager and a business decision between the accommodation service provider and the third-party seller. In some systems, the content of the hotel rooms can be automatically be transmitted to the third-party seller. (Xotels.com)

It is extremely important that all of these systems are easily connectable to many systems, which is what makes its use efficient. Application Programming Interfaces (APIs) allow the data from one system to be transmitted to another system in a format that is accessible and preferably works in two directions, which can allow the information that the booking has been made to the property management system. It is an essential focus for the companies who create these systems that their system is as connectable as possible, because otherwise they might be limiting opportunities for their customers (the accommodation service providers). It needs to be noted that a hotel needs to have a working API for all of their resellers, if they wish to have their inventory dynamically available on their website.

Benchmarking is essential for hospitality companies. The purpose of benchmarking, in the context of revenue management, is to analyze the hotel's price and availability compared to its competitors (Haynes, 2016). It is essential for hospitality service providers to be able to efficiently benchmark the prices and availability services to their competitors. The information for the revenue management team can be benchmarked either manually, or as it is usually done these days, by using rate shopping software. Haynes (2016) suggests using rate shopping data in combination with other data sources when making revenue management decisions.

2.2.4 Revenue Management Systems

Adopting dynamic pricing principles requires revenue managers to make correct decisions in an environment of high uncertainty. This can lead to wrong conclusions due to the difficulty in predicting demand (Orbach & Einav 2017). In 2014, 22% of operators in tourism and hospitality had started using pricing intelligence software, i.e. revenue management systems. They can greatly reduce the human error in making price adjustments (GBTA, 2014). The benefits that arise from using revenue management systems are the result of being better able to manage the trade-off between the price level and how big share of the rooms are sold each night. (Ortega, 2016)

Revenue management systems can either be parts of the systems mentioned in the previous sections or stand-alone systems. Also, the revenue management system needs to be fully integrated with other systems. When the revenue management system is properly integrated with the PMS, the prices are automatically set and updated in all sales channels. As found by Kimes (2013), cultural aspects, such as motivation and ability to quickly adapt to changes affect the success of implementation of revenue management systems.

2.3 Distribution Strategy in Hospitality

> *"All revenue isn't created equal". (Haussman, 2016, pp.17)*

As described by Haussman (2016), reservations for hotels come through different distribution channels and it is essential for hotels to understand the channels the business comes from, how effective the channel is and how much the booking costs to secure (Kimes & Wirtz, 2013). Many companies in the travel industry have adapted their revenue management strategy after the emergence of digital ecosystems (Kimes, 2016). Distribution strategy is an integral part of a successful revenue management strategy. In their distribution strategy, companies decide on where they are selling their products and services. This is done to optimize the hotel's business mix. This study discusses distribution strategy in the context of revenue management. There are other elements that have to do with distribution strategy, such as marketing and visibility that are out of the scope of this study. The implementation that result from well executed and optimal business mix can be anything between only selling via the hotel's on website to having dozens of resellers around the world, both online and offline. Many OTA resellers, such as, Booking.com charge a commission on the bookings through their system (Ling et al., 2015). However, it needs to be noted that far before digital ecosystems emerged, companies in the hospitality industry had used third-party resellers, such as traditional travel agents and distributors.

Companies can choose a single-channel or an omnichannel distribution strategy. With a single-channel distribution strategy, the service provider is only selling their services on their own sales channels, most typically the website, which is more common with transportation and activity service providers. Most accommodation service providers have elected to use an omnichannel distribution strategy where they use third-party sellers, such as OTAs or other distributors to sell their services. The omnichannel model is much more widely used, because the customer often lives in another country, which makes creating the sales funnels highly difficult without third-party resellers. In addition, creating a good enough visibility in all of the countries where the customers come from without using resellers is extremely difficult and costly. When using an omnichannel strategy, Lee et al. (2013) suggest that hotels should operate with multiple OTAs in order to avoid being too dependent on one of them. They also suggest that hotels should strive to always control their own inventory. Hotels often choose to use their own sales channels as a part of their distribution channel mix, enabling them to protect their revenue by not having to pay commissions from those sales (Ling et al., 2015). Because hotels are often working with multiple distributors, the 'Best Available Rate' (BAR) has become an industry norm (Rohlfs & Kimes, 2007). This is done to simplify the buying process for the customers. Because there can be large complexities in hotels' pricing strategies, the BAR-policy always shows the customer the cheapest publicly available rate for a hotel room.

Allotment-based production is a traditional way to manage a hotel's inventory when doing business with third-party resellers. When a contract is made between an accommodation service provider and a reseller, a certain number of rooms is selected to be sold in that particular channel. Whether the reseller commits to sell those rooms or not, depends on the contract. If the reseller takes the risk of unsold rooms, they are usually able to negotiate a cheaper rate or have the guaranteed availability for attractive travel periods, such as the New Year's Eve. If there is no commitment from the reseller, the accommodation service provider can issue a stop-sale, which disallows the reseller to sell those rooms for a period of time. If there is no commitment from the reseller to sell all the rooms, the accommodation service provider is incentivized to use many resellers and have same rooms for sale on many different channels. This can cause overbookings if the communication between the accommodation service provider and the reseller isn't seamless. Even with the digital advancements that have emerged, allotment-based production is still rather widely used, often because the technical requirements for the API between the property management system and the online travel agency are easier to accomplish without connecting the inventories in the hotel's and the resellers' systems. When working with an allotment-based contract, the pricing is often static and valid for long periods of time. They are often higher on the high season but do not fluctuate throughout the booking window, based on the change of demand for a particular night. That fluctuation can be done by the distributor who is trying to maximize their profit and controls the selling price, usually combining it with other products, such as a flight ticket. (xotels.com)

When working with online distribution channels, a common strategy is to combine dynamic inventory with dynamic pricing. In dynamic pricing, the price for a hotel room depends on the demand for that particular room for that particular night. Dynamic pricing often occurs with an OTA that is operating through the agency model. Abrate, Nicolau and

Viglia (2019) argue that hotels do not change prices enough on OTA marketplaces and by increasing the variance of prices, they could earn more revenue through the sales channels. In dynamic production, the rooms are also sold in many channels, but when one is purchased on one of the reseller's website, the available inventory is dynamically updated on all of them and thus eliminates unwanted overbookings. This can be very effective but requires an API that can transfer the inventory data in both directions for all of the resellers.

2.3.1 Online Travel Agents

Online aggregators, such as Booking.com, Expedia or TripAdvisor enable consumers to easily compare and buy services and experiences through their website. They have succeeded in making the booking process easier for customers. A hotel decides to work together with an OTA in order to attract a wider customer base online (Ling et al., 2015; Abrate et al., 2019). Accommodation service providers must to rely on online travel agents as part of their distribution strategy (Kim et al., 2007). Nowadays, nearly 70% of hotel rooms are sold via an OTA (Verhoef et al. 2015). Ling et al. (2015) noted that the bargaining power that OTAs have when negotiating with hotels has grown stronger. Lee et al. (2013) describe the relationship between the hotel and the OTA more as a business partner or vendor instead of merely acting as intermediaries. There is some research that criticize the effects working with an OTA can have on the hotel. Gazzoli et al. (2008) argue that paying high commission to online distributors causes financial problems for the hotels.

With an omni-channel distribution strategy, the accommodation service provider is often selling their rooms both on their own channels and through intermediaries, such as OTAs. When they start working with a distributor, in that contract it is often clarified whether the prices will remain static for the duration of the contract or whether the price can be changed by the hotel during the contract. In many cases, the OTA has a certain way of working that they will use with all of their suppliers. Noone and Mattila (2009) noted that because online distribution channels have become so important for companies, their revenue management and pricing practices have become much more exposed to the customers than before.

OTAs have two operative models that are most common, the agent model and the merchant model. When a hotel is working with a distributor that is earning a commission from the sales, the strategy is called an agent model. Some OTAs, such as Booking.com, operate only via the agent model (Ye et al., 2018). They will make their earnings by earning a commission from all the sales made through their platform. In the agent model, the OTA passes reservations to the hotel and charges a commission on all of the sales through their website. Ling et al. (2014) suggest that the commission that OTAs charge can be as high as 15-30%, especially for smaller hotels that don't have the negotiation power the bigger players do. In the agency model, the hotel always bears the risk of unsold rooms, but is usually able to maintain a higher profit margin. In the agency model, the OTA does not influence the inventory and price decisions, and thus makes it a very heterogeneous marketplace where all players compete with their respective pricing strategies. (Abrate et al., 2019) The OTA can affect the visibility hotels have on the site. Some OTA's, such as booking.com, allow hotels to initiate a strategic partnership, where the charged commission is increased but there is a more prominent display and therefore increased conversion rates are likely. This allows the hotel to increase the demand without altering the end prices to the customer. (Kimes & Anderson, 2011)

The other common alternative is the merchant model. Traditionally, the merchant model has been often used by traditional travel agents and distributors. In the merchant model, the OTA is entitled to purchase the hotel rooms at a wholesale price. They will bear the risk of unsold inventory but could be able to charge a better profit margin if they can generate enough demand. (Abrate et al., 2019; Lee et al., 2013) When working with the merchant model, hotels should ensure that the reseller cannot undercut the prices on their own channels. To ensure rate parity, the hotels rooms sold by these distributors are often packaged with other services, such as transportation.

The third model, which is not quite as common, is the opaque model. In the opaque model, the OTA receives offers from buyers, but the hotel can decline the offer if it views it as insufficient. If the hotels accept this offer, the OTA will match the bids made by the buyers with the lowest bid and then maximize its profits through the differentials occurred in offer prices (Law et al., 2015; Lee et al., 2013). Anderson (2009) argue that hotels should operate with OTAs working with the opaque model if they estimate that they cannot sell all of their inventory. The opaque model makes it possible for hotels to create additional revenue without interfering with the sales channels and structures currently in place. (Lanz & Das, cited in Lee et al., 2013) The best-known OTA that is working with an opaque model is priceline.com.

OTA as a competition environment is intense, because the companies have more hotels to compete with than within traditional sales channels. Also, there are customers who are better equipped than before to have an understanding of what is the market price for the product while also having the ability to instead choose another destination that might be located far away. (Andrés-Martínez et al., 2014) Service providers compete with their competition and attempt to be a desirable option for the consumer who is browsing through their site. In a similar manner as in search engine optimization, companies try to score as highly as possible on the recommendation algorithms of OTAs in order to stay higher on their 'recommended' -lists. After the emergence of OTAs, there was a period which made the practice of revenue management more challenging, because the revenue manager was tasked to manually manage multiple OTAs due to the inability to the lack of compatibility between the systems (Kimes, 2016). Nowadays, some OTAs have started to offer to handle the hotels' revenue management themselves, it remains to be seen whether that is something hotels are willing to outsource (Kimes, 2016).

2.3.2 Key Account Management

Much of hotels' sales are not booked using the publicly available price online. Key accounts, such as group bookings and important corporate customers are often an integral part of hotels' optimal business mix. As described by Wang and Bowie (2009), key account management works in tandem with revenue management while having different goals. Where pricing strategies attempt to maximize revenue in the short term, key account management sees the customer as a long-term investment for the company. Hotels should identify their key customers by analyzing their sales volume and profitability, use of strategic resources, age of the relationship and supplier's share of the customer's business (Campbell & Cunningham, 1983). Millman and Wilson (1999) propose using a combination of hard and soft data to identify the key accounts. Key accounts often receive discounts and are thus less profitable per booked room than a customer booking through the online store. However, hotels must consider the customer acquisition cost, which is far lower for key accounts than transient travelers. In addition, key accounts can greatly reduce the unpredictability of demand and they might not be as price sensitive as transient travelers.

Traditional travel agents and wholesalers still remain an important distribution channel for hotels. They are used for the same reasons as OTAs are being used: they can enable hotels to be discovered by new customers (Lee et al., 2013; Buhalis, 2000). For a long time, travel agents were working with the merchant model. However, recently among the travel agency market, the trend has been building towards dynamically packaged products instead of chartered flights. With this change, many travel agents have also been shifting to the agent model, to avoid bearing the risk of unsold rooms. Transaction cost theory suggest that there are benefits to be gained by collaborating with experts such as travel agents, where the expert can perform the distribution aspects, allowing the hotel to concentrate on performing their core services. (Anderson, 1985; Donaldson, 1990).

3 Data and Methods

3.1 Data

The empirical data for this research has been acquired by conducting four thematic semi-structured interviews. The interviewees were each leading the revenue management departments for their respective firms. The companies were hand-picked with the goal of having accommodation service providers that were large enough that they could fully take advantage of revenue management strategies but also stay clear of the biggest global hotel chains, since revenue management strategies for the biggest hotel chains are often being largely centralized, thus making the results somewhat incomparable. The interviewed companies were approached by email and the interviews were conducted remotely, using both phone calls and video calling software Microsoft Teams. Because revenue management strategies inherently include highly sensitive topics, the interviewed companies will remain anonymous in this study. The empirical part of this research was conducted during April and May 2020, which did make it more difficult to arrange the interviews, since the vast majority hotels in Finland were temporarily closed due to the Covid-19 pandemic.

The interviews varied in length, lasting from 42 minutes to 97 minutes. Rather than conducting many short interviews, the possibility to interview key decision-makers for a longer time, was seen as the preferred option. This was done to allow a livelier discussion with a possibility to dive deep into some topics, if they were seen to benefit the research. Saturation was largely achieved after the third interview but to ensure that something important was not missing, a fourth interview was conducted.

The interviews were conducted both in Finnish and in English. During the interview, a recording was made to ensure the quality of data and to allow more lively discussion without a need for notetaking. After the interview was conducted, the recording was transcribed and if necessary, translated to English. Then, the answers were organized thematically and combined with the other interviews. To support the empirical data from the interviews, several documents, created by independent consultancies, government entities and NGO’s were studied to find supportive knowledge and themes to discuss in the interviews.

3.2 Methods

This research is a qualitative study, and the empirical research has been acquired by conducting semi-structured interviews from key decision-makers in the Finnish hospitality industry. This research is qualitative in its nature for three main reasons. Firstly, it is interesting to understand the decision-making process behind a revenue management strategy. While quantitative methods can be superior in analyzing the effectiveness of the strategy, the elements of a revenue management strategy can be found using qualitative research methods. Guillet and Mohammed (2015) found that that a significant majority (almost 80%) of revenue management studies have been conducted using quantitative research methods. There is a need of qualitative studies to support the earlier research by contributing to the research by conducting qualitative studies, which assess the phenomenon with holistic thinking (Josephi et al., 2016). Secondly, a quantitative study would likely not be able to find answers to the research questions, because it would be difficult to get enough knowledgeable participants for a survey for this research, because there is a relatively small number of hospitality service providers that are sufficiently comparable to each other in size. Thirdly, some of the necessary data (such as regarding pricing decisions or detailed figures on business mix) is highly sensitive and not likely to be available for a research like this. As argued by Kaplan and Maxwell (1994), to understand a phenomenon in the point of view of the researched entities is largely lost when textual data is quantified instead of analyzed using qualitative research methods.

This master's thesis was conducted using a descriptive multiple-case study approach. The research aims to describe the phenomenon of revenue management strategies within the context of operating in the Finnish hospitality market during early 2020's. It aims to be an empirical inquiry on what the revenue management strategies for Finnish hospitality firms in Finland are like and then to find common elements that can be generalized to be used as a basis for a successful revenue management strategy. The purpose is to create a holistic understanding on the elements of a revenue management strategy instead of analyzing the effectiveness for each strategy, because to do that trustworthily would be too big of a task for one research. Interviews were conducted as semi-structured interviews. By using semi-structured interviews, the questions were formed beforehand but there was room during the interview to talk more deeply about fruitful topics. In addition, the set of questions could be slightly different from one interviewee to another, depending on their company and position.

The questions were formed based on the prior literature discussed in the literature review. The questions were designed to be largely open-ended to avoid feeding the interviewees answers while giving them a possibility to expand from the question posed.

3.3 Trustworthiness of the Study

For qualitative research, the quality of the research is traditionally evaluated by the quality and trustworthiness of the study (Eriksson & Kovalainen, 2008). To make sure that the data quality is high, interview guides were formed before the interviews. After each interview, the transcribing took place before the following interview, enabling the modification of the question set and thus controlling the required emphasis on each research question. The biggest modification between the interviews was done to increase the emphasis of managing the revenue for corporate and group segments, to accommodate on their importance on the business mix of the hotels.

Eriksson and Kovalainen (2008) outlined that qualitative research should be based on validity, reliability and generalizability. Steps were taken to ensure these characteristics' presence in the study. To establish a valid base for the research, prior literature was analyzed extensively and the questions for the empirical part were formed using themes and topics found on the prior literature. To make sure that the research is reliable, widely used research methods, like case study on the phenomenon and semi-structured interviews were used. It needs to be noted that as time passes and technology develops, new ways to do revenue management will emerge and might change or create new elements to the revenue management strategy. Thus, there might be a need to update this research later. To establish a generalizable study, the case companies were hand-picked with generalizability in mind. Even though the study is focusing on the Finnish hospitality market, the results are fairly generalizable to other markets as well.

The interviewees were asked the permission to record the interview and steps have been taken in anonymizing the data, because some of the topics discussed were confidential information. This data was naturally left out from the scope of this master's thesis. In all of the interviews, clear communication was used to ensure which data could be used in the thesis.

4 Findings

In this chapter, the empirical findings of the interviewed industry professionals are analyzed thematically. Their answers have been divided into five main topics: revenue management as an organizational function, revenue management strategies, inventory management strategies and tools and distribution strategies. The future or revenue management was also discussed with the interviewees. Then, the findings are subdivided into more detailed topics.

4.1 Revenue Management as an Organizational Function

4.1.1 Role of Revenue Management

All interviewed companies had set up their revenue management practices within separate support functions in their organizational structure. Thus, the revenue management team manages the revenue for each of the company's hotels instead of each location having their own revenue manager that is working under the hotel's general manager. This allows the revenue manager to make decisions more independently while enabling more effective execution of the group's revenue management strategy. Often, one revenue manager is responsible for the revenue management of multiple hotels, some requiring more effort than others. The interviewee from company C described the most important drivers that predict the revenue manager's amount of effort to be the number of rooms in the hotel and how much demand there is for groups and meeting services. For company C, some hotels require four-to-five times more effort from the revenue manager than others, which has an effect on their resourcing. The interviewee from company D highlighted the importance of doing revenue management in close coordination with other departments, such as marketing and e-commerce. Revenue managers are also an integral part of opening a new hotel. The interviewee from company D described the most important actions before opening a new hotel to be making an assessment on the potential revenue and occupancy at different times, as well as the structure of sales between segments; the business mix. These assessments will influence how many of certain room classes and types will be built to the new hotel. These efforts are also necessary in major renovation projects that occur from time to time.

The interviewee from company A believed that the importance of revenue management will grow in the future as a "hybrid actor and a link between operative sides like sales marketing and finance" as there are few people who have such a good grasp on the performance of the entire hotel. The interviewee from company C noted that the emergence of revenue management systems has dramatically changed revenue managers' roles, because the systems are able to make complicated decisions quickly. Therefore, revenue manager's role is to configure and monitor the system rather than make simple and repetitive decisions.

After updating to a more sophisticated revenue management system, company C had realized that the importance of revenue manager had grown, because while the new, more sophisticated revenue management system could make more decisions faster than the best revenue manager, the revenue manager's role in configuring and monitoring the system is paramount. The interviewee from company C continued with describing how as revenue management systems improve, the importance of the revenue manager grows:

> *Our old system was like a Fiat. You could not drive it very fast, but the car is stable. The new system is like a Ferrari. It can go extremely fast, but if the driver is bad, you end up in a ditch very quickly. (Interviewee from company C)*

4.1.2 Characteristics of a Successful Revenue Manager

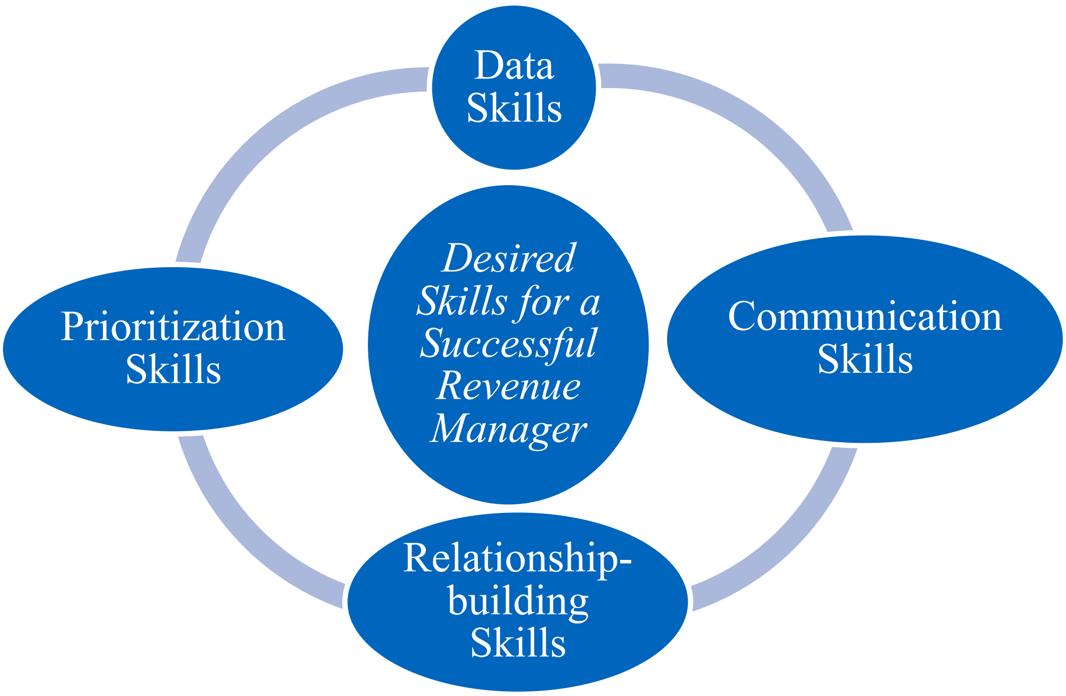

Figure 3: Desired Skills of a Successful Revenue Manager[1]

[1] Adapted from the interview with company C

The above figure illustrates the most important skills that a successful revenue manager should possess, as described by the interviewee from company C. The revenue manager needs to be data-driven and skilled to understand, analyse and utilize data. However, it is important that revenue managers don't hide behind the data but instead are able to communicate it well and "create insights, not numbers or charts".

> *Previously, revenue managers were expected to have great mathematical and analytical skills. There is nothing wrong with those skills and we still need those. However, communication skills and being proactive and trustworthy have become increasingly vital for a revenue manager. (Interviewee from company C)*

Revenue managers must have the ability to build relationships with other people, regardless of the organizational structure. Collaboration with other departments, such as e-commerce, marketing and hotel management is vital. Because there is so "much data and so little time", prioritization skills are also highly important, as noted by the interviewee from company C. In addition to these skills, the revenue manager must have the ability to understand and communicate various levels of information:

> *Revenue managers need to have the ability to dive deep and understand numbers on the microscopic level but also the ability to quickly go up and see situations in the birds-eye view and communicate these insights. (The interviewee from company C)*

4.1.3 The Role of Data

> *There is a lot of information available to us, the bigger challenge is the limited time that can be used to make a decision. (Interviewee from company A)*

All interviewed companies strongly emphasized correctly utilizing and interpreting data when making revenue management decisions. The data can include various kinds of datasets, such as historical data, booking trends, the forecast or benchmarking data of competitors' price or available capacity. A relevant challenge is to effectively include all advantageous data in decision-making. As described by the interviewee from company A, there is a lot of information, but the main challenge is the finite amount of time available to make each decision. The data needs to be arranged to an understandable format that can be properly combined and analyzed. The always-present constraint of time makes having a successful revenue management strategy extremely vital for accommodation service providers, because the correct processes and systems can ensure that data is acquired, interpreted and utilized in a correct manner. The interviewee from company D advocated for continuously making experiments that stem from the data. After the experiments, analyses should be conducted to evaluate whether that set of data was interpreted correctly or not.

4.2 Revenue Management Strategies

4.2.1 Estimating Demand

All interviewees agreed that estimating demand accurately is a key task that needs to be done correctly to enable effective revenue management. Both company A and B emphasized the need to have an accurate forecast. The forecast is either automatically or manually created tool that estimates demand for a time period in the future. Company A described it as below:

> *All revenue management work is based on a forecast that is born from historical data, market data and revenue manager's own estimate. Some kind of forecast or an estimate of the total demand in the future is needed. (Interviewee from company A)*

Both company C and company D underlined the importance of having an accurate demand calendar in place where all the events that can drive demand to their destinations are highlighted. Company B and C are using a revenue management system to create forecasts for all of their locations. The system observes transactions and the booking pace along with other data sets to be as accurate as possible. Efforts should be made to ensure that the forecast is as accurate as possible, because the revenue management's success is strongly dependent on the accuracy of its forecast.

Historical data is information that companies have on demand for certain time periods, usually the same time period the year before (or a combination of several years) is used. Market data can be information regarding competitors' capacity along with external data. Revenue manager also often makes their input and a combination of those is the forecast. There are various tools to automatize forecasting but often the revenue manager oversees the forecast. The interviewee from company A noted that when making revenue management decisions, the revenue manager also uses booking pace as an important metric.

Company A pointed out how the trends in the historical data often repeat itself and can be learned from. They described how the amount of demand shifts in a predictable manner throughout every week for the whole year, apart from July. That information can be used in their forecasting. A common weekly demand curve for the hotels in city locations develops as described by the interviewee from company A:

> *Sunday is always the slowest day and the demand starts growing from there. Tuesdays and Wednesdays are the peak days during the week. On Thursdays there will be a slight drop in demand before it grows again for Friday and Saturday due to weekend travellers. (Interviewee from company A)*

According to company A, the hotels in Lapland behave slightly differently from hotels in the cities. Since the average stay is far greater than in the cities, the demand curve works more accurately on a broader scope. The whole December is a time of high demand. In January, the demand drops for few weeks before picking up again and then remains at a high level for two months. In Lapland, Easter is a dividing point; the demand remains high until then, but after Easter it drops drastically and is at a low level until the summer.

Both company C and D noted that some events, like the entrepreneurship conference Slush in Helsinki in November, bring so much demand until the last minute that hotels are able to keep prices high until the arrival date. Company C also mentioned the importance of having an event strategy solely for those special periods. Sometimes there can be events or festivals, that change the demand in a way that cannot be predicted from historical data (either ones not considered or ones more substantial than predicted). The interviewee from company C argued that at times when demand exceeds supply, the importance of revenue management increases and there are opportunities to make bolder choices in pricing. The interviewee from company A suggested a method where they regularly check how well the time period is selling for their competitors. This can be done by either manually checking competitors' availability on their website or using rate shopping software to analyze the price changes that their competitors are making.

4.2.2 Customer Segmentation

Interviewees found it vital to have the ability to comprehend where their business is coming from, because the business mix can differ greatly from one hotel to another. Company A finds it essential to be able to understand the structure of sales to each hotel, because "it defines and affects almost all the actions a hotel takes". The interviewee from company C highlighted the differences in product, price and time sensitivities between different segments, price sensitivity being of most importance. Company D has designed their segmentation with a goal of having more accurate statistics that they can use to guide them in their decisions. The below illustration is how company B segments their customers, on an elementary level. All other interviewed companies had a relatively similar segmentation structure. In reality, there are subsections of each segment on the bottom level, enabling increased understanding on the customer and their price, product and time sensitivities.

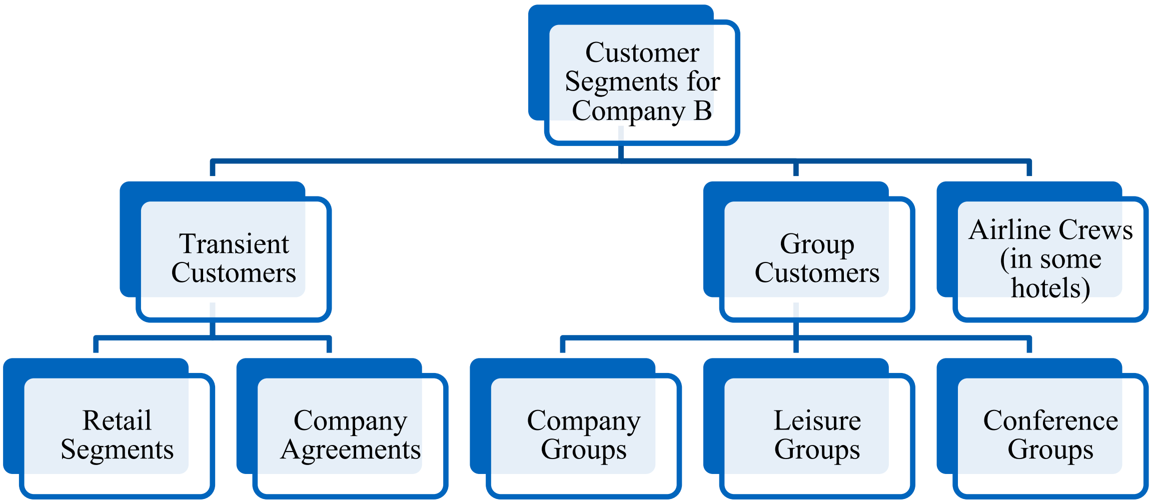

Figure 4: Customer Segments for Company B[1]

Transient customers are either singular customers or small groups who are often booking a relatively short stay at the hotel. The retail segments are purchasing the public price, either through the hotel's own channels or through a distributor. Company C views the retail segments the most important, because every other segment either has a dynamic or static pricing method that is largely based on the retail segment. In practice, a corporate client could have a contract stating that they are eligible for a certain percentage discount off the retail price.

[1] Adapted from the interview with Company B

Corporate clients generally have a contract with the hotel, where prices have been agreed beforehand. Corporate clients can belong to either transient or group customers, depending on the amount of rooms and room nights needed for the occasion. Company D noted that the faster they have been able to reply to the corporate customer, the greater chance of getting their business they have. The interviewee from company C describes the process of strategizing and negotiating contracts with corporate clients.

> *We sit down during the summer with the corporate sales team and discuss the most important clients and our strategy for the RFP period. We have a tool in place which gives us a rate span where our offer should land, but in the end, the price is a negotiation between two parties. (Interviewee from company C)*

The interviewee from company D emphasized the importance of knowing and understanding the corporate customer as well as the concept of reference price.

> *We need to evaluate who is making the request and their willingness to pay. Big, multi-national companies are often willing to spend much more than a start-up. Whether the group has stayed with you before matters, because they know what they have paid in the past. Often, we know what kind of budget they have. If the accommodation is within their budget, they will most likely accept our offer, regardless of the season or overall demand. (Interviewee from company D)*

Leisure groups are offered a group rate that is generally discounted from the retail price. When setting a price for a group, the interviewee from company B emphasized the importance of trusting the forecast to estimate the demand for the time period requested. They also noted that often the group prices are often based on a contract. However, they still analyse the total demand and can decrease the price from the contracted rate if there is a need for additional bookings. The interviewee for company C describes their process of managing group requests below:

> *When receiving a request for a rate for a group, the sales team runs a query to the revenue management system to suggest a price for group. The evaluation takes into account information such as the client, amount of room nights requested, as well as*

> *estimated demand for the dates requested. The system offers both a breakeven price and a suggested price. (Interviewee from company C)*

4.2.3 Benchmarking to Competition

> *Companies need to analyse their competitors; they must find the right competition for them and monitor their pricing and then find their strategic price position. (Interviewee from company D)*

All interviewed companies are tracking their competitors' prices and availability. Most of their competition have their availability at their own online store. Company A follows their competition and they see when certain room types disappear from their competitor's selection from a certain date, meaning that they are sold out. Interviewed companies use rate shopping services to follow how competitors' price develops and use that information as a part of their analysis. If the price keeps rising, they know that there is demand and they can raise the price level, or vice versa.

Many accommodation service providers in the Nordics, including all interviewed companies, are tracking their competitiveness using a service called Benchmarking Alliance (STR is a global comparable service). It is a service that provides information on a hotel's competitiveness against a pre-selected subset of competitors. Each firm submits necessary data to the system on a daily basis, and the service anonymously provides competitiveness data of the hotel on a desired level (such as in Helsinki). Many companies, such as company B, have integrated that data into their revenue management system. Both, the rate shopping data and the competitiveness data can be integrated into revenue management system, that makes the pricing decisions.

4.2.4 Strategic Price Positioning

Hotels need to design their strategic price position against their competition, as mentioned by the interviewee from company D. If the company has a willingness to operate at different price points, companies can either use different brands to communicate the price positioning, as some of the biggest international companies, like Hyatt and Marriott do, or make smaller adjustments to the price positioning within the same brand. Separate brands allow wider options for the strategic price position. However, this research is focused on price positioning on a smaller scale, within the same brand.

For company C, location is by far the biggest factor to determine price positioning. Other factors of significance are the brand image and how recently the hotel has been renovated. In destinations where they have multiple units, they have a destination strategy in place to prevent cannibalizing the demand for their own units by competing too heavily within the group. The interviewee from company C described the Helsinki hotel market as "location-dominant", because the share of business customers is large compared to other destinations. Business customers generally appreciate central location and convenience.

4.2.5 Pricing Strategies

All interviewed companies are using and strongly advocate dynamic pricing methods, meaning that the price of a hotel room can be changed throughout the booking window, depending on the demand for the service. Often, capacity is optimized by changing the price to stimulate the demand. Company C has a basic principle, which is that "earlier you book, the cheaper the room is". Company A emphasized the importance of keeping the price level stable and/or rising until the expenditure date.

> *Our goal is that the public prices for day X are always rising or at a stable level for the entire booking window. Issuing last-minute discounts cause shorter booking periods and customers learn to wait for them. This makes forecasting more difficult and thus optimizing capacity becomes more difficult. (Interviewee from company A)*

Last-minute discounts can occur when a hotel has not sold enough of their capacity and decides to stimulate the demand by lowering the price level for those dates close to the expenditure date. Company A believes that last-minute sales often appear to customers as "illogical and not credible". The interviewee from company B objected to using them noting that excessive discounts at the last minute can give wrong signals to the market and it may not be possible to raise the prices back to their desired, ordinary level. The interviewee from company A described the constant challenge of making compromises between strategic price positioning and tactical pricing decisions:

> *Sometimes, the demand is really low and if we were only optimizing RevPAR for one day, we would have to be selling at a lower price for that night that we really are. However, the price creates an expected value for the customer. We might not be able to justify raising prices back to regular levels to our customers and that can cause big problems. (Interviewee from company A)*

Company A and company B are using different methods in setting the price. Company A has not set any price classes and thus, in theory, there are unlimited options for the price. Company B is using tiered pricing, similar to the airline industry, where their revenue management system has several pricing tiers that the system then opens or closes, based on the amount of demand.

Whether the hotels are using a revenue management system or not, they often have created floor and/or ceiling boundaries on what the minimum and/or maximum price can be. This is done to create backstops to make sure that the prices are within a certain, desired rate span. Company A is basing their floor price on their cost structure but have no limits for the ceiling price. Company B, as a principle, does not want to base their pricing on their costs and therefore the floor prices are based on demand at slow periods as well as the service level the customers are expecting. Company C generally wants to base their prices on demand, but in some cases, the differences in the rental agreements between hotels could enable them to sell hotel A at a cheaper rate than hotel B and still make the same profit margin, thus leading them to sell hotel A for cheaper than the demand would indicate for other locations. Company D uses floor price rules to ensure that low prices would not hurt their profits and brand image.

Customers' length of stay often has a factor in the price of a hotel room. Company B noted that customers staying for a longer time is preferred, because that reduces both the risk of unsold rooms they have and their booking fees. Thus, there should be incentives in place for customers to do that, such as discounts for staying longer. Company A has noted the differences in average length of stay between different hotels, thus making it possible to give discounts also to the public prices for prioritized hotels where customers naturally wish to stay longer. Company C has introduced a long-term rental service, which offers discounts for customers that are staying for a longer period of time.

> *Controlling the price difference between room types is a good way to direct sales. If the demand for our standard room exceeds our supply, we need to find ways to direct the excess demand to superior rooms. (Interviewee from company B)*

Hotels must ensure they have enough demand for all of their room classes, not only the standard rooms. Hotels traditionally have different room classes, such as the standard and superior room. Room classes are then subdivided into room types within a room class, such as a twin or a double room. There are different ways to manage room classes. Traditionally, the room classes have had a static price difference, to reduce manual workload. However, modern revenue management systems have enabled dynamic price differences, as described by the interviewee from company B. Company A attempts to maintain a static difference between different room types, and views it being feasible 70-80% of the time. Companies B, C and D estimate demand on a room class level, and they are each priced dynamically. Still, there are restrictions, such as that a superior room can never be cheaper than the standard room. Company C has adopted static or relative price differences in the room types within a room class, depending on the unit.

Some interviewees noted the difficulties in making a compromise between the strategic price level and tactical pricing decisions. The interviewee from company A gave an example of a situation they are facing often. They strive to emphasize the importance of long-term strategy and underline the ability to see the big picture:

> *If a corporate client approaches us with a budget that is far lower than the retail price, we must consider whether we should make a favour for them to secure their business. Each situation needs to be evaluated with the big picture in mind, because the long-term vision and strategy mean everything to us. Sometimes, we must sacrifice the RevPAR for one day to secure an important client. (Interviewee from company A)*

The interviewee from company D noted that for bigger international brands, the brand can affect the pricing in a way some loyal customers will stay with them, regardless of the price, thus impacting their pricing strategy. In those situations, customers are not as price sensitive and thus the importance of maintaining the strategic price level exceeds the need to make tactical pricing decisions.

4.2.6 Measuring the Success of Revenue Management

There are many metrics that are helpful in analyzing the success of hotels' revenue management actions. The interviewee from company B highlighted the influx of new metrics, which started to emerge in early 2010s, when people realized how many different methods there could be to measure the success of revenue management actions and the performance of the hotel. The interviewee from company C mentioned the importance of following the trends and development of the indices, rather than solely the numbers, when measuring the success of revenue management. Below are some common measures that were mentioned by the interviewees:

$$RevPAR\ (€) = \frac{Generated\ Revenue}{Available\ Rooms} \tag{2}$$

> *RevPAR combines occupancy% and average daily rate, thus making it the most important metric. (Interviewee from company C)*

RevPAR (Revenue Per Available Room) is a metric that measures how successful the hotel was with regards to accommodation services for a particular night. RevPAR is a traditional metric that has been used by hotels for a long time and was mentioned as the most used metric by all of the interviewees. The interviewee from company A finds it the best out of the simple metrics in use. RevPAR simply indicates how much money a hotel is making per rooms available to sell. As noted by the interviewee from company C, it combines occupancy% and average daily rate, because it is measuring revenue per available rooms, thus making it a far more attractive metric to use for optimizing revenue management.

$$ADR\ (€) = \frac{Generated\ Revenue}{Rooms\ Sold} \tag{3}$$

ADR (Average daily rate) is a traditional metric used by hotels, which shows the average price customers paid for a room during a particular time period. It can be used for the whole hotel or a particular room class.

$$RGI = \frac{Hotel's\ RevPAR}{Market's\ RevPAR} \tag{4}$$

> *I believe that RGI is one of the most useful metrics out there. It tells the hotel's revenue and potential in relation to the marketplace. Following the absolute level of RGI and how it develops is extremely important. (Interviewee from company B)*

RGI (Revenue Generation Index) is a metric that shows the acquired revenue by the hotel relative to its competition. If the result of the index is above 1, the hotel is performing better against its set of competing hotels. Vice versa, if the result falls below 1, the hotel is not performing as well as their competitors. RGI was strongly endorsed by the interviewee from company B, noting that it has the ability to demonstrate the hotel's revenue and potential in relation to the market it operates in.

$$GOPPAR\ (€) = \frac{(Hotel's\ Revenue - Hotel's\ Costs)}{Available\ Rooms} \tag{5}$$

GOPPAR (Gross Operating Profit Per Available Room) is a metric that integrates the costs of operating the hotel into the traditional RevPAR formula. While it was seen by the interviewees as highly promising metric that will likely grow in popularity, its widespread adoption is yet to take place. The interviewees from companies A and D acknowledged the difficulties in estimating all necessary cost items accurately, which makes optimizing GOPPAR difficult until there are major developments on data quality on the cost side to ensure that the costs are measured accurately and trustworthily.

$$TRevPAR\ (€) = \frac{Total\ Generated\ Revenue}{Available\ Rooms} \tag{6}$$

TRevPAR (Total Revenue Per Available Room) is a metric that measures the revenue generated by the entire hotel, whereas other common metrics solely consider the accommodation services for a hotel. The interviewee from company C believed that in the future, TRevPAR as a metric will exceed RevPAR in importance. The interviewee from

Company D noted that they would like to use TRevPAR more than they are currently using, the biggest hurdle being accurately combining data from different revenue streams.

$$Occ\% = \frac{Sold\ Rooms}{Available\ Rooms} * 100 \tag{7}$$

Occupancy% is a simple and traditional metric, which measures the share of hotel's rooms that were sold for a particular night or time period. According to the interviewee from Company B, the optimal occupancy rate is strongly dependent on the hotel's business mix, hence making occupancy a suboptimal metric to use for optimization of revenue management actions. However, if the occupancy rate is between 90% and 95%, one can assume that the revenue manager has done a reasonably good job, as generalized by the interviewee from company B. Company C noted would like to have their occupancy at 100%, but they are never using occupancy% to optimizing their prices, because it would lead to a sharp decrease in revenue.

Some other metrics, such as the OPI and ARI indices, which are measuring occupancy and ADR against the competition, were mentioned, but not used as nearly as widely as the abovementioned metrics. There are additional data sources that the interviewees are using for decision-making. Statistics Finland is providing data for accommodation service providers that can be used to enhance decision-making. Company A is using that data to measure the market shares based on where their customers come from (such as the share of Koreans visiting Helsinki at a certain time). For them, it is especially interesting for hotels and destinations that have a large share of international guests. Company C noted that in uncertain times, such as during the Covid-19, following these trends will be even more important than usual, due to the challenges in accurately predicting which markets would recover first.

4.3 Inventory Management Strategies and Tools

4.3.1 Controlling Capacity

As noted by Kimes & Wirtz (2013) and the interviewee from company B, capacity cannot be added or reduced in the short term. However, there are actions hotels can take to make sure their capacity is being controlled in an optimized fashion. Company C has set up several kinds of controls, both manual and automatic, in their revenue management system to enable them to control their capacity more effectively. This is mainly done by controlling the availability of certain price codes and categories.

Even though hotels do have considerable fixed costs and relatively small variable costs, there can be times when demand is not high enough to justify keeping the hotel open through periods of low demand. Company A closes some of their hotels in Lapland for a period of time during the summer. They would prefer to keep all of their hotels open year-around but considering the lack of demand during the low season in tourist destinations, currently they do not view it feasible. There are also some seasonal closings that are typical in the Finnish hospitality market, such as temporal closings during Easter and Christmas in some cities, as noted by the interviewee from company C.

4.3.2 Optimizing Capacity

Company A emphasized how essential it is to have an accurate forecast as a basis to optimize capacity. All revenue management actions that are made are based on the forecast. Although price is the most common tool to optimize capacity, there are other ways to do it to support the pricing actions. Company A and C both use different cancellation terms for different amounts of demand. During a time of extremely high demand, they can sell rooms with a high price and strict cancellation terms. This ensures that they receive the money even if the customer does not show up. At the same time, they can have more lenient cancellation terms for a period of low demand. They can also make restrictions based on length of stay or payment terms. Company C has set up their online sales channels in a way that for busy weeknights, there could be restriction of a minimum length of stay if the demand is high enough.

Overbooking is an often-used tool for many accommodation service providers, including all interviewed companies. Companies overbook to sell the optimal amount of their capacity while proactively combating cancellations. The interviewee from Company B described overbooking as “one of the simplest and most used methods to optimize capacity”. The interviewee from company A gave an example on the situation where overbooking could prove to be useful:

> *We know that a major share of the group customers often cancels before arrival. By utilizing that information, we can overbook the hotel with confidence for that period and trust that there are enough cancellations to offset our overbooking, resulting us to sell the optimal amount of our capacity. (Interviewee from company A)*

As noted by the interviewee from company D, the number customers within group bookings almost always reduces before arrival. The interviewee from company C noted that the overbooking level varies a lot between hotels, room classes and arrival periods. To better optimize their capacity, company C estimates the wash (realization%) before they quote an offer to the group. They have noticed that after adopting a new, more developed revenue management system, they have overbooked a lot more than before:

> *Our new revenue management system overbooked over 140 rooms in some units during a time of low demand. A lot of the bookings then got washed, and it was a great success. We estimated it to be an extremely quiet period and didn’t have the courage to overbook to that extent. The system saw that there is a lot of unconstrained demand for certain room classes that would realize later. (Interviewee from company C)*

If there are large differences in the demand for different room classes, upselling can be an effective strategy to direct some of the demand to the desired room class. Company D has noticed that a good upselling strategy can be tremendously valuable, not only because the superior room types generate more revenue and profits, but also because then, the capacity for all room classes can be effectively optimized. The interviewee from company B describes their process of utilizing upselling to optimize capacity:

> *The most effective way to upsell for us is after the customer has booked with us. Upselling can be done by email or at the check-in. Revenue managers create a price*

> *that we offer to customers during the check-in. By offering this option to the customer, we can level the demand between room classes. (Interviewee from company A)*

Sometimes, customers can also be upgraded to higher room classes free of charge, as a way to generate goodwill to the customers while optimizing capacity. Upgrading techniques are often used if upselling techniques are viewed as insufficient for that time period. Company C is using upgrading mainly for their loyalty customers and they measure the amounts of upgrading by monitoring the differences in booked room nights and stayed room nights per each room class.

4.3.3 Information Systems

Property Management System (PMS) is the system that hotels use to manage hotel operations. Often, the PMS also includes the functionalities needed to perform revenue management and that is how revenue management has traditionally been practiced. Company D is managing the revenue of some smaller hotels by making the price adjustments into their PMS without using additional software to set prices for their services.

Company A has a PMS system that is connected to their distribution channels via channel managers. There are other systems that are often integrated to the PMS. Company A is using a rate shopping system and a competitiveness tracking system. These additional systems can be used to enhance the data that is available for the revenue manager to make a decision. Once automatization processes and systems are in place, they can also potentially utilize the competitiveness data which brings insights of the competitive market the hotel operates in.

4.3.4 Revenue Management Systems

Alternatively, revenue management and price changes can be done on a separate software, namely a revenue management system, which is integrated with the PMS. The purpose of the revenue management system is to automatize the revenue management functions that can be mathematically modeled, such as changing the price of the hotel room and how much each room class should be overbooked by for each night. The interviewee from company A emphasized the large variety of revenue management systems available and the vast differences in their capabilities. They also emphasized the importance of the possibility to integrate as much data as possible to the revenue management system, to enhance its decision-making capabilities. Company A are currently working on a pilot to install revenue management system to automatize their revenue management actions. Companies B and C are using a revenue management system that is making their revenue management decisions. Company D highlighted that by using a revenue management system, they aren't "missing out on opportunities".

There are some wishes that the interviewees had for the revenue management systems to enhance their revenue management practices. The interviewee from company A wished that the information the systems are providing would be more customizable to each hotel due to differences in the competitive markets they are operating in. They also hoped that the data would be presented in a way that requires minimal processing from the revenue manager and to have more total revenue management principles inserted into the revenue management system. The interviewee from company B noted that the expectations for the system are generally understood and well defined in terms of what kind of data can be taken in and what kind of results can be achieved. However, they hoped for more development in making the systems smarter. They are using a system that is based on machine learning and therefore the situation is constantly improving as the system learns their competitive environment better. Company C aims to direct their development efforts for their revenue management systems to be able to have agile pricing, where they can price all customer segments dynamically, instead of having relative or absolute discounts that are based on the retail segments.

4.4 Distribution Strategies

Company A pointed out the natural differences between hotels and noted how same distribution strategies cannot be used everywhere. Hotels that are in destinations that have predominantly leisure travelers generally have a larger share of group bookings, whereas hotels that are located in city centers benefit from the influx of corporate clients. The importance of OTAs as sales channels also grow in the larger cities with more competition. All interviewed companies have set up their PMS system and distribution channels in a way that there is no need for manually updating prices and availability. However, many small and individual hotels are forced to manually update them. Company B noted that it is important for them to have the distribution ecosystem built in a way that rate parity between all distribution channels is ensured. However, rate parity issues can arise when some third-party online players purchase rooms from wholesalers and sell them at a cheaper price via their own channels. However, the hotels should have a contract between them and the wholesalers that should prevent this kind of behaviour.

4.4.1 Group Bookings

Company A highlighted that in some hotels, the group bookings are just important as the bookings made online at public rates. In some hotels, the share of group bookings within their business mix can exceed 50%. Company A treats traditional travel agents like group bookings. They have an agreement with them, but they don’t view them as online channels. Also, the travel agents are rarely just selling the hotel room, but they are instead packaging it with other services, such as transportation.

4.4.2 Hotel’s Online Store

Hotel’s own online channel is an important sales channel for the hotels, because the customers booking via the online store are paying the public retail rate and thus hotel does not need to pay commission to any distributors, as noted by the interviewee from company B. According to the interviewee from company B, each major hotel chain in Finland has a strong online presence. They also noted that bigger international chains often get an advantage of getting more bookings through their own online channels, due to their more dominant brand recognition.

4.4.3 Online Distribution Channels

Company B noted that for hotel chains operating in Finland, generally the share of bookings through OTAs is around 20%. However, there are some smaller hotels where the share of OTA bookings can exceed 80%. The interviewee from company B highlighted the importance of using OTAs as distribution channels when a global reach is desired. Company B has an organizational strategy, where the marketing department responsible for their brand, makes the decision on which online channels they decide to participate in. The reason behind the way of working is that presence in online channels needs to support the brand image and goals. In collaboration with the e-commerce team, the revenue managers then make efforts in optimizing the search engine results within OTAs to optimize their visibility. The interviewee from company B also highlighted the importance of utilizing data to evaluate the performance of each online distribution channel to ensure that the revenue managers' efforts are directed to the right tasks.

Company A has a policy stating that they only work with distributors with whom they can form an integration between their PMS and their system, to avoid manual work in updating the prices and availability in their distribution channels. Company A describes a common online distribution setup for Finnish hotels.

> *In practice, in Finland there are three main operators (Expedia, Booking.com and HRS). We have a contract with them, and our inventory and prices are linked to theirs. They can push the inventory and prices forward to other parties, and in the end, our services are sold in hundreds of distribution channels. (Interviewee from company A)*

Company D described how the winner-takes-it-all -phenomenon has become relevant within the competition between the OTAs. Booking.com has been able to establish market leadership in the Nordics and thus have the possibility to charge high commissions while still providing value to the accommodation service provider, due to their global reach.

> *It's no secret that booking.com is an expensive OTA but they are the one that really bring significant volume. (Interviewee from company D)*

There are various alternative online channels, but relatively few are viable for Finnish accommodation services providers. Usually, the online distribution channels are connected to one of the abovementioned main operators. Accommodation service providers can also make a direct contract with the smaller distribution channels. Usually that could bring increased visibility on the channel or a lower sales commission, as described by the interviewee from company A. They also mentioned Bidroom as a service that is trying to transform the dominance the biggest companies have in the OTA marketplace. However, the supply of hotels on the platform is not yet large enough for company A to participate in that channel. The interviewee from company D noted that it is useful to have a presence on various distribution channels, to increase visibility among otherwise inaccessible customers. However, having many distribution channels increases the amount of time and effort needed to manage them, as noted by the interviewee from company D. They also noted that the importance of the quality of the relationship with the OTA’s account manager is generally undervalued and can bring benefits in making sure the operations between the two parties are smooth. Some online channels are inherently more important to others and should be focused on. This varies between hotels and their different business mixes. For example, hotels with a large share of Chinese customers can benefit from distributing their services through C-Trip.

4.5 Future of Revenue Management

To have a better understanding on where the field of revenue management is headed and how it will evolve in the future, the theme “future of revenue management” was also discussed with the interviewees. Most common topics mentioned were improved revenue management systems and two developing concepts of revenue management: total revenue management and reputation pricing.

Total revenue management is a concept that has been discussed for years in academia and within the industry. The method aims to optimize the performance of the whole company instead of solely its accommodation services, while making revenue management decisions. In practice, this means that ancillary services, such as the restaurant, possible meeting room and activity services, should all be included into all revenue management decisions and systems, as defined by the interviewee from company B. Company A is currently using these methods but it is based on estimates rather than data. For example, at times of high demand, they only accept group bookings to their hotels, if the group also is purchasing their restaurant or activity services. The main challenge is to combine the data from different systems into the revenue management system in a format that does not require manual effort. The interviewee from company C believed that meeting services will be one of the first streams to be fully included in hotel’s revenue management. They have a strategy in place to include the meeting services into their revenue management and have taken successful steps towards executing it, but “aren’t yet in a phase where they could really call it total revenue management”. Company C noted that especially for some hotels, meeting services are “rather a simple business” and thus they have felt that the benefits acquired might not justify creating new processes and systems, at least until now. Another reason for the postponement of the execution is that the data quality for other revenue streams needs to improve further in order for them to fully be able to adopt total revenue management thinking.

The interviewee from company A proposed that reputation pricing is a trend that could change revenue management in the future. Since customers' decision-making process largely involves analyzing reviews written by other customers, they should become a larger part of revenue management decisions. Company C has noticed that in some units, the customer reviews have been strong enough to enable them to make bolder decisions in their pricing. However, in some hotels with lower customer reviews a need emerged to re-evaluate the strategic price positioning for those units. Currently, the customer review information is used but not integrated to the revenue management system, as described by the interviewee from company A. Integrating customer review information in revenue management systems would lead to utilizing the customer review data more efficiently.

Interviewees from companies C and D both mentioned integrating costs into revenue management decisions. The interviewee from company D argued that revenue management as a word is misleading, because the end-goal should be to optimize profits instead and thus be called profit management. The interviewee from company C mentioned that artificial intelligence and machine learning are disruptive forces that are likely to change revenue management in the future, in one way or another.

5 Discussion

The following chapter aims to analyze the findings in the previous chapter in more detail while comparing the findings to prior literature, in order to provide conclusions for the research. By analyzing companies' revenue management strategies that have proven to be successful, elements can be found that can be generalized to the hospitality industry at large. This chapter presents the elements that successful revenue management strategies have and thus attempt to provide an answer to the research questions mentioned in chapter 1.3.

5.1 Revenue Management Strategies

PR1: "What are the elements of a successful revenue management strategy for an accommodation service provider?"

In order to discover the elements of a successful revenue management strategy, the findings were first analysed thematically, and key themes that form a successful revenue management strategy were found. Within the primary research question, main elements that will be discussed are utilization of data, desired skills from revenue managers, revenue management's role within the organization and strategic and tactical pricing decisions.

As described by Noone et al. (2011), there is a growing amount of useful data that can enhance decision-making for revenue management's purposes, such as benchmarking figures, customer reviews along with traditional data. These datasets have made it possible to have more accurate forecasting and estimates on price elasticity. All decisions that revenue managers make should be based on data. As mentioned by the interviewee from company D, the decisions made can only be as good as the data used to make that decision is. Companies should strive to gather credible and trustworthy data from different sources, as described by company C:

> *If our data isn't 100% credible, we can't draw credible conclusions from it. (Interviewee from company C)*

Companies should also continuously look for new sets of data that could enhance their decision-making capabilities. A strong revenue management strategy can expand the boundaries caused by finite amounts of time to make a decision, because the correct processes and systems can ensure that data is acquired, interpreted and utilized correctly.

Due to the vast amount of available data, companies need to find effective methods to process and understand the data before they can utilize it in their revenue management decisions. In an ideal world, a revenue management system would take into account all useful data and takes that into consideration when setting a price for a hotel room. However, the system will need to be configurated correctly for it to utilize the data in a correct manner. In the future, more effective use of machine learning technologies can assist with implementing new data sources to improve decision-making. The ability to understand the applicability of possible new data sources as well as find discrepancies in existing data is crucial in making revenue management decisions, even when there is a revenue management system in place. To ensure that data is understood correctly, there is a requirement of to both understand the nature of data and to have an ability to find errors in it while having an effective way to process and utilize the data in decision-making.

Even though all departments may not use data as thoroughly and extensively as the revenue management department, the ability to gather, process, understand and utilize data should be rooted deeply into the hospitality organization. Revenue management's role is to provide insights that stem from the gathered data. These beforementioned factors lead to the first element of a successful revenue management strategy:

- ***Organizational ability to gather, process, understand and utilize data.***

> *To have the right people and right strategy in place is extremely important. (Interviewee from company C)*

Successful application of revenue management strategy requires the right people, technology and the organization itself (Josephi et al., 2016). To execute a successful revenue management strategy, the right kind of people should be in charge. According to Kimes (2011), modern revenue managers should be analytical and tech-savvy problem-solvers and possess communication and leadership skills. As described by Den Boer (2015), the skills nowadays needed from revenue managers are more advanced than in the past. Revenue managers should always be data-driven, since all decisions should be based on correct data. As mentioned by the interviewee from company C, they need to "have the ability to dive deep and understand things on the microscopic level but also the ability to see things in the birds-eye view". Revenue managers should also have good communication skills, in order to have the ability to deliver the insights that they should be providing. Sometimes, revenue managers must convince other departments, such as the hotel management that the recommended action is the correct one to take. Since much of revenue managers' work is done in co-operation with other departments, relationship-building skills are also vital. With the vast amount of available data and nearly endless combinations of customer segments, booking times, staying periods and room classes, prioritization skills have become vital for a revenue manager. A combination of these skills are better prerequisites for a successful revenue manager rather than previous experience in the hospitality industry, although certainly there is no harm in having that. Finding the correct people is obligatory for a company to be able to execute their revenue management strategy, thus leading to the second element:

- ***Finding data-driven people, with good skills in communication, relationship-building and prioritization, to make revenue management decisions.***

The organizational structure needs to be designed correctly for revenue management to perform efficiently. Bititci et al. (2012) suggest that companies should move away from the traditional silo structure companies have had and start blurring the borders between sales, marketing and revenue management departments. They argue that hotel organizations should instead create a demand management department that consists all three departments. The new demand management department could benefit from having clear processes and enhanced collaboration between the people in different teams. Josephi et al. (2016) argue that revenue managers should be given increased authority and autonomy to supervise and oversee all revenue streams rather than solely the revenue from accommodation services, resulting in a more senior position in the organizational structure, reporting to the general manager.

Although, all the interviewed companies had decided to have their revenue management as a separate support function, in some occasions, there could be valid reasons to have a revenue manager reporting to each hotel's management. Each company should find the organizational structure that is optimal for them. Regardless of the organizational structure, it is essential that revenue managers are able to make revenue management decisions independently and efficiently. Hence, there should be a close relationship between revenue management, sales, e-commerce and marketing, thus creating a demand management department should be considered by hotels. These are some of the factors that should be considered when a hospitality company's organizational structure is being designed. Thus, the organizational element hotels should consider is:

- ***Having an organizational structure where revenue management can make effective decisions and collaborate with necessary stakeholders.***

As described by Altin (2015), forecasting is one of the most important tasks for a revenue management team, because all revenue management decisions should be based on an accurate forecast. The forecast should utilize all necessary data and aim to be as trustworthy as possible while having the ability to adapt to the changes in the marketplace. Companies should look to expand the data sources that make the forecast to enhance its quality. Often, historical data is used to estimate the demand for a time period in the future, but companies should also take into account other factors, such as the booking pace, trends, and possible events that could drive business to their hotel. Forecasting is often done by the revenue management system. Efforts should be put in to ensure that the forecast is as accurate as possible and constantly evaluate how successful it was in the past. Including different scenarios within the forecast can be beneficial for the company when they are evaluating the demand for their services in the future.

Because the revenue management's success is strongly dependent on the accuracy of its forecast, it is essential that hotels have an accurate and up-to-date forecast, which can be used both for revenue management's purposes as well as in budgeting for the corporation in a larger scale. Therefore, in order to successfully execute a revenue management strategy, companies must have an:

- ***Accurate and up-to-date forecast.***

As outlined by Kimes and Wirtz (2013), hotels should look to have more analytical and data-driven approaches to segment their customers. Understanding the business mix of the hotel is crucial, as mentioned by the interviewee from company A. Different segments have different price elasticities, and that should be taken advantage of in the revenue management strategy. Analytical methods, such as computerized systems should be used to offer rates to potential customers, whether that is an occasional request for a group traveling to the destination or a corporate customer that is negotiating a flat rate for their employees for the entire year. The beforementioned forecast should be utilized to estimate the correct rate for a group. When estimating a rate for a corporate customer, the factors that should be taken into consideration are the likely volume in the short- and medium-term and their booking behaviour, such as when they are traveling and how early they typically book their stay. A continuous re-evaluation of the segmentation should be done using data-driven approaches. Companies should look to finding the correct price level for every customer and look into the possibility of dynamically adjusting each customer segment, to take advantage of the differences in price elasticities between the customer segments. Thus, companies should make sure they are:

- ***Understanding the customers and the differences in their price elasticities to have the correct price level for every customer.***

Creating the correct price position for a hotel is vital for its success, because it creates the expected value for the customer and creates the boundaries where tactical pricing decisions operate in. While a majority of strategic price positioning, such as the hotel's concept which should greatly affects its price positioning, is out of the scope for this study, it deserves to be mentioned in the revenue management strategy. Revenue management should, together with the marketing team, establish the correct price position for the hotel. If the hotel's price is positioned too high, the customers will arrive with excessive expectations and it can lead to bad customer reviews, as explained by the interviewee from company C, and thus lead to reduced demand in the future. Whereas if the hotel is positioned too low, potential revenue is lost. Hotels must analyse their main competition and find a price position that is fitting for the concept of the hotel. Therefore, hotels should make sure and regularly re-evaluate that they are:

- ***Having the hotel's price position set up correctly against the competition to support its concept.***

As found by Akshay (2005), price is seen as an excellent indicator for quality. Thus, accommodation service providers should ensure that the customers' expectations of quality are met. While they could bring short-term benefits, lowering prices at the last minute can be detrimental in the long term, because it might be difficult to justify raising prices back to the original level, which can subsequently lead to decreased demand in the long-term (Nelson, 1970). Hotels should incentivize their customers to book earlier, because that reduces the uncertainty in forecasting and lessens the risk of leaving capacity unsold. Because of the low variable costs typical for the industry, hotels should look to fill most of their capacity. Tactical pricing decisions are an often-used tool to achieve that, as lowering the price is a simple an effective method to boost demand. As noted by Alderighi et al. (2016), it is more common in the hospitality industry that prices are increasing when the consumption is getting closer. Revenue managers should find ways to have the ability to make tactical pricing decisions, such as changing the price or launching sales campaigns. However, in the big picture, they should aim to have mostly stable or raising price level throughout the booking window to incentivize customers to book earlier. Floor prices can be used to ensure that the brand image is not being sacrificed for a short-term gain. Ceiling price can be used if the hotel is uncertain of how their revenue management system operates at times of high demand. Tactical pricing decisions should always be complying with their up-to-date forecast. With these conditions in mind, it can be noted that in their pricing strategies, hotels should be:

- ***Finding correct ways to make tactical pricing decisions while having a mostly stable or rising price level within a rate span until arrival***

After the emergence of OTAs, it has become far easier for customers to compare the price levels for accommodation services. As described by Haynes (2016), the purpose of benchmarking in hospitality is to analyse and compare the price and availability to the competition. Before the developments in online sales channels for the travel industry, the customers had to make phone calls or compare several different websites to find the market price for accommodation in a certain destination is. Nowadays, market prices can be evaluated quickly, and price comparisons can be made easily by visiting one of the several available aggregators, which compare the prices for accommodation services. These developments have made it necessary for hotels to have the ability to benchmark their prices against their competition. By using benchmarking software, this can be done automatically without manual efforts. In addition to price, competitors' availability should also be monitored. By doing that, hotels can get additional data points to estimate the unconstrained demand more accurately. If the competitors are mostly sold out for a period, it is more likely that there is still unconstrained demand to utilize. Services like Benchmarking Alliance or STR provide anonymous performance data from competitors to utilize in revenue management. This data should be used in evaluating the success of revenue management decisions. Thus, hotels should find ways to:

- ***Efficiently benchmark prices and availability to competition and use that information in revenue management decisions***

Hotels should make sure that they are evaluating their performance and revenue management decisions effectively. By correctly analysing the various available metrics and data, performance of hotels can be tremendously increased due to the more effective and systematic implementation of the revenue management strategy. As described by the interviewee from company D, more emphasis should be put in measuring profits instead of solely revenue.

> *There is a lot of talk in changing the word of revenue management to profit management. It is easy to make a lot of revenue, but often that will come with a cost of losing profits. (Interviewee from company D)*

Many traditional metrics that are used widely, such as RevPAR and ADR, consider revenue while ignoring the cost side, which remains equally relevant. In the hospitality industry, the variable costs are naturally relatively small, which has led companies to measure revenue instead of profits. However, to be truly able to optimize the financial performance of hotels, revenue management actions should be directed towards optimizing profits instead of revenue. Traditionally, the problems in measuring profits had arisen from the inaccuracies in the cost data. Necessary actions should be taken to ensure that the cost data is available and trustworthy enough in order to be fully included in revenue management decisions. By understanding the structure of the costs, better revenue management decisions can be made and thus the performance of the hotel can be increased. Therefore, hotels should work towards optimizing profits instead of revenue.

As described by Josephi et al. (2016) and mentioned by several interviewees as having been discussed in the hospitality industry throughout the 2010's, the concept that could revolutionize revenue management in the future is total revenue management, which considers the performance of the entire hotel, instead of solely their accommodation services. However, the majority of hotels still optimize different revenue streams as isolated processes. One of the reasons behind the delay in implementation is the lack of computerized tools that can fully utilize data from different revenue streams. Josephi et al. (2016) argue that the technological advancements will make it possible to effectively merge the different data sources within one system, enabling revenue managers to smoothly interpret the data from all revenue streams and react to the changes in the marketplace. Hotels should aim to optimize the profits for all available revenue streams. Efforts should be made in finding ways to enhance the data quality of the ancillary revenue streams and include that information in the every-day revenue management decisions.

Hotels should find the correct metrics to measure and evaluate their revenue management decisions. However, solely looking at the correct indices might not measure the success of the revenue management actions correctly, because each hotel is different and some score naturally lower in certain metrics, which can be caused by aspects such as the hotel’s location or cost structure. It is integral for hotels to follow the development of indices that are deemed key for the particular hotel. Generally, some of the key indices that should be considered are TRevPAR, GOPPAR, RGI, OPI and ARI. These metrics and their development should be used to systematically evaluate the success of revenue management actions and the hotel’s performance against its competition. Thus, hotels should be:

- ***Finding correct ways to optimize profits for the whole hotel and monitor the development of key indices to systematically evaluate the revenue management decisions that have been made***

5.2 Inventory Management Strategies and Tools

SR1: “What are the elements of inventory management strategies and tools that should be in place to support the revenue management strategy?”

Accommodation service providers should have an inventory management strategy in place to support their revenue management strategy. The items that are hereby discussed within the first secondary research question are non-price elements that are used to optimize and control capacity and the information system strategy (to the extent of its relation to revenue management).

Hotels should design their information system strategy with revenue management's needs in mind. As described by Melis & Riga (2017), in the most recent decade, it has become far easier for smaller hotels to create effective IT infrastructures, due to the wide availability of scalable cloud-based solutions. Hotels should work with a revenue management system, provided that the volume of the hotel's sales is large enough to offset the costs of implementing the system. Efforts should be put in making sure that the correct revenue management system is selected out of the multitude of options available. Factors that should be considered include the system's intelligence, effectiveness in enabling automatizing manual tasks, and the compatibility with the rest of the IT infrastructure. As mentioned in 5.1, efforts should be made to ensure that the revenue management system receives all data that the revenue management team estimates to be beneficial in making revenue management decisions. Most modern revenue management systems are using machine learning techniques to improve their performance over time. In order to have an effective inventory management strategy, companies should strive to have an:

- ***Information system infrastructure where an intelligent revenue management system receives all useful data and makes every-day pricing decisions while enabling automatization where possible***

The revenue management system should be fully integrated to the property management system and there should be fully working, bi-directional API connections between the PMS and the distribution channels. If the systems are set up in that manner, it removes the need to manually update prices and availability to different sales channels. These kinds of manual tasks should be systematically avoided, when the manual work does not add value. Some of the tasks that have been automatized in some companies are forecasting, price changes and quoting group offers. In order to allow more efficient use of time and resources, companies should look to automatize the processes where revenue manager's manual input does not bring clear and measurable benefits. To achieve that, companies should look towards:

- ***Automatizing the processes where manual work doesn't add value***

However, even after the correct manual tasks have been automatized, it can be beneficial to have backstops in place when manual intervention is needed. For example, company C has inserted backstops to their automatized process of automatically quoting group requests. The backstops can come into play if the forecasted demand is sufficiently high for an arrival period. Certain automatic controls should be in place to ensure that the system is configured correctly, and capacity control remains at an optimal level, especially if revenue managers are not yet familiar with its behaviour in different market conditions. Also, the revenue management strategy should include systematic, manual controls that ensure that there are no flaws in the revenue management systems that are unidentified. When working with a new revenue management system, the frequency of manual controls can be higher in the beginning but should then be reduced when the trust towards the system increases. Thus, companies should be:

- ***Having certain controls in place to ensure that capacity is controlled effectively***

As described by Kimes and Wirtz (2013), the high fixed costs and low variable costs of the hospitality industry incentivize the hotels to always sell the majority of their available capacity. As mentioned in 5.1, the price level throughout the booking window should be mostly stable or rising. This pricing strategy incentivizes customers to book earlier, which can increase the predictability of demand in the long-term. In addition to changing price, hotels can use alternative methods, such as changing the booking conditions. Booking conditions can include non-price items such as cancellation or payment terms. A practical example of a non-price method in use is company A. They have set up much stricter booking conditions for periods of high demand. This allows them to receive money even with a large number of no-shows or late cancellations. Vice versa, hotels can attract customers by having favourable booking conditions, which can be effective in uncertain times, like the recovering phase of Covid-19 when there is a lot of uncertainty. Companies should find methods to sell a large majority of their rooms each night by using a combination of tactical pricing, marketing and changing the booking conditions.

- ***Finding ways to use non-price methods to support the pricing methods in optimizing capacity.***

Overbooking can be one of the simplest and most effective ways for a hotel to optimize their capacity, thus making it an integral element of a successful revenue management strategy. Companies overbook to counter-act to no-shows and late cancellations. However, it is essential that hotels don’t overbook excessively, because capacity cannot be added in the short term (Kimes & Wirtz, 2013), and there are costs when customers are declined at the check-in even though they have a booking. Declining customers at check-in can lead to both having to pay for their new accommodation and creating bad reviews and word-of-mouth. Companies should find ways to understand their customers' behaviour as accurately as possible to understand their likelihood to cancel their booking or not show up. Revenue management systems should have the intelligence to include that information in their decisions on what overbooking level they operate at. Company C found that their new, more sophisticated revenue management system was overbooking far more than their revenue managers were, or their older revenue management system would have, especially at times of low demand, resulting with great success. In many cases, there are opportunities for revenue managers to be bolder in their overbooking levels and revenue management systems' analytical approach can assist firms in it. Accommodation service providers should find the correct overbooking level for all room classes for all periods. Hence, hotels should be making efforts to:

- ***Finding correct overbooking levels for each night and each room class by understanding their customers***

The amount of demand for all room classes and room types are rarely equal. Because capacity cannot be altered (meaning that a superior room cannot become a regular room, because it has certain characteristics, such as a bigger bed and better view) in the short term (Kimes & Wirtz, 2013), it is essential for hotels to fill the capacity in all of their room classes. Before a hotel is opened for sale, revenue management makes an assessment on the demand for different room classes for different time periods. But due to the volatile nature of demand, that assessment may not always be correct. One, rather simple, method to control the demand is changing the price. Traditionally, uniform price differences have been in place between room classes, for example resulting that the superior room is always 30€ more expensive than the standard room. Recently with the emergence of revenue management systems, that price difference between room classes can also become dynamic with certain preconditions (such as the superior room can never be cheaper than the regular room).

Often, the challenge is that the regular room classes are full but there are superior rooms that are left unsold. This happens both because the regular room is cheaper but also partly on purpose, because it is easier to move people from the regular room to the superior room than vice versa. Most used non-price methods to optimize the capacity of different room classes are upselling and upgrading. In upselling, the company attempts to convince the customer to change their booking to the superior room class. This is typically done either via email after the booking, or at the check-in. Companies should evaluate whether there is a need for having a special offer that can be promoted to the customers. It is advisable to teach the customer to purchase the superior room already when they are making the booking, because that makes forecasting easier by reducing the unpredictability of customer behaviour during an upsell process. If there haven't been enough customers who have bought the superior room, some guests could be upgraded, free of charge. Usually, upgrading customers for free is used as the last resort for hotels and takes place during the check-in. When upgrading techniques are being used, it is essential for the hotel to be able to select the right customers to upgrade. Generally, a loyalty program is a good source of data forming the base for selecting the upgraded customers. The most loyal customers can become adversaries for the hotel chain if they receive exceptional service, such as upgrading to a superior room. Loyal customer acquisition cost can be tremendously smaller with a loyal customer base, as explained by the interviewee from company B. Due to the typical cost structure in hospitality industry, upgrading a customer for free is usually preferred to them staying at the regular room and leave the superior room empty. These factors lead to the last element within the inventory management strategy:

- ***Finding correct ways to direct the demand to desired room class by dynamically controlling the price and utilizing upselling and upgrading methods.***

5.3 Distribution Strategy

SR2: "What are the elements of an optimal distribution strategy to support the revenue management strategy?"

A distribution strategy is an integral part of a successful revenue management strategy. This section aims to analyse and discuss the elements of a successful distribution strategy to the extent of its relation to the revenue management strategy. Other aspects of a distribution strategy, such as marketing and visibility within distribution channels fall outside of the scope of this research, and while being important for the long-term success of a hotel, are not discussed within this study. As emphasized by the interviewee from company A, it is crucial for revenue managers to understand who each hotel's customers are, in other words, the business mix for each hotel. Different hotels have different characteristics, and aspects such as location and the nature of services offered affect which kinds of customers prefer that particular hotel. When that is understood, revenue managers can start working towards finding the optimal business mix for that hotel.

Each distribution channel has a cost. Corporate customers are usually not paying the public price online, but rather get a discount on the room, as per the agreement between the client company and the hotel. If the customer is part of a group, the group has most likely been quoted an offer which is usually cheaper than the public price. Customers booking via online channels also come with a cost. Usually, the OTAs operate with a commission model where the hotel will be liable to pay up to 20% in commissions to the online channel as a sales commission. Generally, the preferred customers are the ones who are booking through the hotel's own online store. There are some costs that are in place to have a running online store, but they are generally far smaller compared to any other sales channel. When analysing what the optimal business mix for a hotel is, total revenue management principles should be taken advantage of. For example, corporate travellers often pay a cheaper price for the room, but they might rent a meeting room and use restaurant services along with the accommodation. When analysing what the optimal business mix for the hotel is, revenue managers should consider both the cost structure of sales channels and the service concept that the hotel has. The optimal business mix will most likely differ from one hotel to another due to the differences in their service offerings. When the knowledge of optimal business mix is acquired, the revenue management team together with sales and marketing can begin to take action on executing that business mix and prioritizing the correct distribution channels. Distribution strategy is an integral part of a successful revenue management strategy, and revenue managers should make sure that they are:

- ***Understanding what the optimal business mix is for each hotel and design their distribution strategy to correspond to that.***

When the optimal business mix for the hotel is known, actions need to be made to ensure that it can be achieved. Often, in order to reach the optimal business mix, hotels should increase the sales through its own sales channels, particularly their online store. Big, international brands often have an advantage over smaller players due to their better name recognition, as described by the interviewee from company B. Companies should ensure that their online store is easy-to-use and when possible, have their marketing efforts, both in their social media pages and paid channels, to direct the customers to purchase on their own channels instead of the myriad of online channels available. To incentivize potential customers to purchase through the hotel's online channels, hotels should ensure that the rates are always at the same level on the hotel's own website and external sales channels. This concept is called rate parity. It can be achieved by both designing the IT systems in a way that rates and availability are automatically updated to every sales channel and making sure that the contracts between the company and sales channels prohibit external resellers from undercutting the online prices from the hotel's own prices. Hotels should ensure that their online store is attractive to direct customers to book there. In addition, companies should ensure that rate parity is in place. Thus, companies should consider these two elements of a successful distribution strategy:

- ***Finding correct ways to direct bookings to own sales channels***
- ***Making sure rate parity is in place for all distribution channels***

Online channels are great tools for hotels to get customers that otherwise would not find the hotel. This holds true for both independent hotels and local hotel chains. As described by the interviewee from company A, there are three main OTAs in the Finnish hospitality market (Booking.com, Expedia and HRS). It is typical that hotels make a deal with those online channels directly. Then, their capacity is pushed to dozens of other online channels due to agreements between the OTAs and the third-party distribution channels. These channels often have a regional focus. As described by the interviewee from company D, benefits might arise, when the hotel is working directly with several online channels, usually resulting in increased visibility and marketing benefits. However, the more online channels there are, the more work needs to be done to ensure all sales channels are working as designed. Since many online channels have strong regional focus, it could pay off for hotels to focus on collaborating with sales channels that are strong in regions that they wish to have more visibility in. Hotels should find the OTAs that fit well to their brand and regional visibility strategies. As described by the interviewee from company D, revenue managers should make sure that they keep a good relationship with the account manager from the OTAs. This can ensure smooth operation between the two parties, which is essential in bringing home business through the online channels. Thus, revenue managers should make sure that they are:

- ***Finding correct OTAs that support the hotel brand and visibility goals and maintain a good relationship with them***

6 Conclusions

The aim of this section is to conclude this master's thesis and summarize the results discovered in the previous section. In addition, practical implications for management are discussed. At the end, limitations of this study and suggestions for further research are provided.

6.1 Research Summary

> *"Revenue management in the context of hospitality is the process of allocating the right type of capacity to the right kind of customer at the right price so as to maximize revenue or yield" (Kimes, 1989, p.15)"*

As defined by Kimes (1989, p.15), revenue management aims to allocate the right type of capacity to the right kind of customer at the right price. By viewing revenue management as a strategic process, companies' performance can be increased (Vorhies & Harker, 2000).

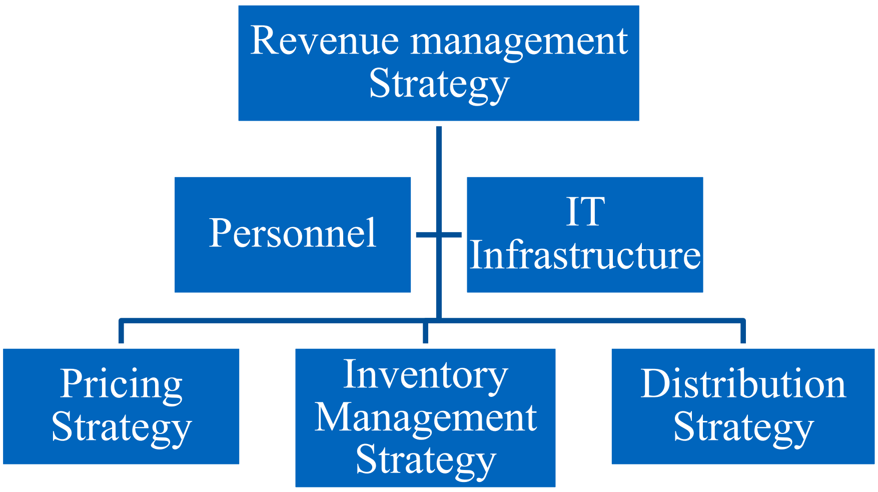

Figure 5: Components of a revenue management strategy

To conclude the research, it has been found that the three major components that revenue management strategies consist of can be broken down to pricing strategy, inventory management strategy and distribution strategy. Pricing strategy is concerned with what price each night of accommodation should be sold at. An effective inventory management strategy ensures that the capacity is optimized effectively, using both price and non-price methods.

Distribution strategy ensures that optimal business mix is executed by selling through right distribution channels. In addition to the three major components, two aspects that significantly shape the revenue management strategy are the company's IT infrastructure, especially regarding the revenue management system and its connectivity to the various distribution channels and their personnel. The characteristics that are desired from revenue managers are described to be skills in data management, communication, relationship-building and prioritization.

There is a vast amount of research about revenue management, but the majority of conducted research has been quantitative research focusing on the optimization between price and capacity (Guillet & Mohammed, 2015). This research aims to fill the gap in prior research by providing insights into the elements of a successful revenue management in the context of Finnish hospitality market. While the study is done in the Finnish market, the results are fairly generalizable to other hospitality markets. To gain a comprehensive understanding on revenue management strategies, inventory management strategies and tools and distribution strategies were analyzed with their relation to revenue management. Thereby, this research aimed to answer the following research questions:

- ***PR1: "What are the elements of a successful revenue management strategy for an accommodation service provider?"***
- ***SR1: "What are the elements of inventory management strategies and tools that should be in place to support the revenue management strategy?"***
- ***SR2: "What are the elements of an optimal distribution strategy to support the revenue management strategy?"***

The empirical part was conducted by interviewing decision-makers in the industry. The elements found during the empirical part can be summarized to six themes: organizational, data and insights, strategic, tactical, operational and information systems. Organizational elements include the capabilities of handling data, hiring revenue managers with correct skills and characteristics and having an optimized organizational structure. The theme of data and insights include having an accurate and up-to-date forecast, correct segmentation of the customers, benchmarking to competitors' price and availability, using analytics and correct metrics to evaluate performance and discovering the optimal business mix for the hotel. Strategic elements include price positioning, overbooking, selecting the right distribution channels and directing customers to the hotel's own sales channels. Tactical elements include having a raising price level throughout the booking window, pricing supplements dynamically and tactically adapting price and booking conditions to the market. Operational elements include automatizing processes, having capacity controls and ensuring rate parity in all distribution channels. The last theme, information systems is present in all elements but deserves to be mentioned as its own theme due to its importance in enabling the execution of other elements of a revenue management strategy.

Figure 6: Six themes of a successful revenue management strategy

The below table summarizes the found elements by the respective research question that each element addresses, thus aiming to answer the research questions established in the beginning of this research.

Table 3: Elements of a Successful Revenue Management Strategy

PR1: "What are the elements of a successful revenue management strategy for an accommodation service provider?"

- *Organizational ability to gather, process, understand and utilize data.*
- *Finding data-driven people, with good skills in communication, relationship-building and prioritization, to make revenue management decisions.*
- *Having an organizational structure where revenue management can make effective decisions and collaborate with necessary stakeholders.*
- *Accurate and up-to-date forecast.*
- *Understanding the customers and the differences in their price elasticities to have the correct price level for every customer.*
- *Having the hotel's price position set up correctly against the competition to support its concept.*
- *Finding correct ways to make tactical pricing decisions while having a mostly stable or rising price level within a rate span until arrival*
- *Efficiently benchmark prices and availability to competition and use that information in revenue management decisions*
- *Finding correct ways to optimize profits for the whole hotel and monitor the development of key indices to systematically evaluate the revenue management decisions that have been made*

SR1: "What are the elements of inventory management strategies and tools that should be in place to support the revenue management strategy?"

- *Information system infrastructure where an intelligent revenue management system receives all useful data and makes every-day pricing decisions while enabling automatization where possible.*
- *Automatizing the processes where manual work doesn't add value*
- *Having certain controls in place to ensure that capacity is controlled effectively*
- *Finding ways to use non-price methods to support the pricing methods in optimizing capacity.*
- *Finding correct overbooking levels for each night and each room class by understanding their customers*
- *Finding correct ways to direct the demand to desired room class by dynamically controlling price and utilizing upselling and upgrading methods.*

SR2: "What are the elements of an optimal distribution strategy to support the revenue management strategy?"

- *Understanding the optimal business mix for each hotel and design their distribution strategy to correspond to that.*
- *Finding correct ways to direct bookings to own sales channels*
- *Making sure rate parity is in place for all distribution channels*
- *Finding correct OTAs that support the hotel brand and visibility goals and maintain a good relationship with them*

6.2 Practical Implications

There are clear practical implications that managers can take away from this study. Successful revenue management clearly has an impact on hotel's earnings, and thus should be given great focus on an organization-wide level (Josephi et al., 2016). Companies should create a revenue management strategy to establish common goals for the entire organization. Then, an effective execution of the revenue management strategy enables organizations to reach those common goals. Because organizations and markets differ greatly from one another, the successful revenue management strategies will differ from each other as well, and the particular strengths and competitive advantages that the organization has should be taken into account when creating a revenue management strategy. Accommodation service providers should assess their current revenue management strategies and closely analyze the different elements discussed in this research, whether there are some areas that they haven't considered in their revenue management, inventory management or distribution strategy, either on a strategic level or regarding the implementation of the strategy. By evaluating their revenue management strategy by analyzing the elements discussed in this study, accommodation service providers can be better equipped to compete in the marketplace.

There are other beneficiaries who could benefit from this study. Apart from decision-makers in accommodation service providers, revenue managers can increase their understanding of the strategic organization-wide concepts of revenue management and apply them to their every-day decision-making. In addition, third-party companies, such as OTAs or companies supplying IT applications for accommodation service providers can gain an increased understanding on what hospitality firms aim to accomplish with their revenue management actions and how they attempt to reach them in practice.

6.3 Limitations of the Study

The results of this research are fairly transferable. The most important limitation stems from the fact that due to a lack of resources, this research did not have a possibility to evaluate the root causes in why the case companies chose to do their revenue management in a certain way. There could have been cases, where an external force, such as the capabilities of the company's IT ecosystem, forced them to do their revenue management in a certain way. However, there are reasons to believe those cases are relatively rare and do not discredit the elements found in this research. The data for this research was acquired in Finland in the midst of the Covid-19 pandemic, which caused severe difficulties for hospitality service providers and closed the vast majority of hotels in the Finnish market for a period of time. Due to the uncertain nature of the time period the research was conducted, there is a possibility that interviewees were not willing to discuss certain elements due to the uncertainties in the financial states of their respective organizations. Since successful revenue management is largely dependent on utilizing data and technology, it may be necessary to update the findings of this research. When technologies inevitably advance further, there could be new unforeseen elements that change the nature of revenue management. In terms of transferability to other markets, one needs to address the similarity of the hospitality market in order to assess the transferability of these results. For example, if online sales channels are rarely used in a destination, some elements of the revenue management strategy cannot hold place.

This research only discusses revenue management in the context of accommodation service providers. There are other fields, such as transportation and car rental dealerships or even museums that are using revenue management practices and principles, but this study solely focuses on revenue management for the hospitality industry. Although there are similarities and businesses in other fields may very well find something useful from this study, there are certain characteristics (such as the nature of capacity and customers' booking behavior) that can lead to suboptimal conclusions. This study assumes that the capacity that hotels have in their use is stable and thus cannot be increased or decreased in the short term. However, in reality there could be situations where capacity could be altered also in the short term, which could affect the revenue management strategy remarkably. There are areas that fell outside the scope of this research but could very well be beneficial for both the academia and the practitioners of revenue management. They will be discussed in the next chapter.

6.4 Suggestions for Further Research

This research was focused on finding the elements that together form successful revenue management strategies for accommodation service providers operating in Finland. The research was conducted in the context of the Finnish accommodation service market, but a global study would give more generalizable view on the topic of revenue management strategies. Similarly constructed studies in other markets would give an objective tool for a comparison of different hospitality markets, which could prove to be useful for practitioners. In addition, it would be beneficial for the industry to research the process companies must go through when they are crafting their revenue management strategy. Because this study focuses on the elements on a rather broad and strategic organization-wide level, there are areas that could compliment this research fairly well. Any of the previously mentioned element and theme could be worth studying more deeply while analyzing their effective implementation options in practice, both using quantitative and qualitative methods. More thorough understanding of the necessary IT systems and their interdependencies in relation with the revenue management strategy would be useful.

There remains a need to study revenue management strategies in other industries, especially in industries were revenue management principles are relatively novel, such as ground transportation and museums. There is relatively large amount of literature concerning airlines' revenue management practices, but service businesses that haven't been using revenue management practices for very long could benefit from a research specifically designed for the characteristics of that industry.

Finally, it would be useful to understand what kinds of skills the people making revenue management decisions in hospitality companies need in order to implement the planned strategy and how these skills should be taught both at universities and at the job.

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Appendix A: Interview Details

Code	**Position**	**Interview date**	**Interview method**	**Interview length (min)**
Company A	Head of Revenue Management	23.4.2020	Teams	75 min
Company B	Market Revenue Manager	28.4.2020	Phone	42 min
Company C	Director of Revenue Management	7.5.2020	Teams	97 min
Company D	Senior Revenue and Distribution Manager	14.5.2020	Phone	51 min

Appendix B: Interview Guide

BACKGROUND

- Could you introduce the company you are working for?
- What is your role and responsibilities regarding revenue management?

REVENUE MANAGEMENT STRATEGY

- Where is revenue management located in your organization?
- How do you create customer segments and use them in revenue management?
- How are you evaluating the time periods of high and low demands and how are they treated in pricing?
- Are you using dynamic or static pricing strategies?
- How are you evaluating demand for a period in the future?
- Are you using fare classes or are there infinite price options for a single room?
- How do you price group bookings?
- How do you price corporate clients?
- How do you decide the rate span for each room class?
- How do you price the length of stay?
- How do you price the differences between room classes?
- How do you make the compromise between strategic price level and short-term tactical optimization?
- Are you benchmarking your prices to your competition? How?
- What kind of metrics are you using to measure the success of your revenue management and why?

INVENTORY MANAGEMENT STRATEGY

- Apart from price, what other methods do you use to optimize capacity?
- How do you balance the demand between different room types and service offerings?
- What is your IT system infrastructure like?
- In the context of revenue management, what would you wish the systems to be like?
- How do you control the prices in every distribution channel?

DISTRIBUTION STRATEGY

- What is the business mix for your hotel like?
- What are the shares of different distribution channels like?
- What kind of distribution channels are you using?
- How do you choose the distribution channels you operate with?
- What is the competition like within the OTAs?
- Do you think the relationship with the OTAs are balanced?

FUTURE OF REVENUE MANAGEMENT

- How do you believe revenue management will be practiced in 5-10 years?